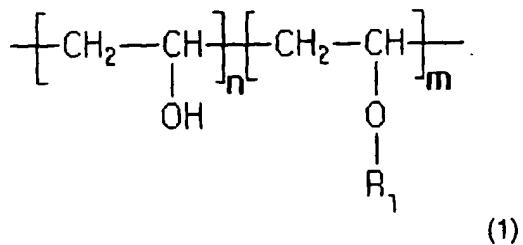


CLAIMS

What is claimed is:

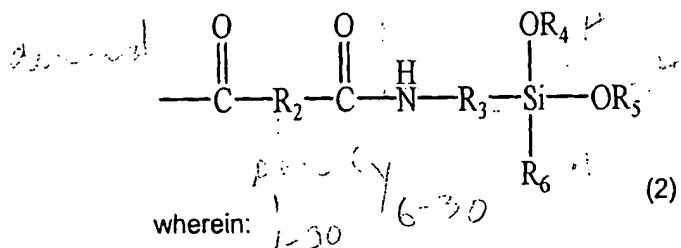
1. A water-soluble, antimicrobial active polymer represented by Formula 1:



wherein:

n and m are the number of repeated units, n is 0.7-0.95 and m is 0.05-0.3 provided that $n+m=1$; and

R_1 is a silane derivative represented by Formula 2:



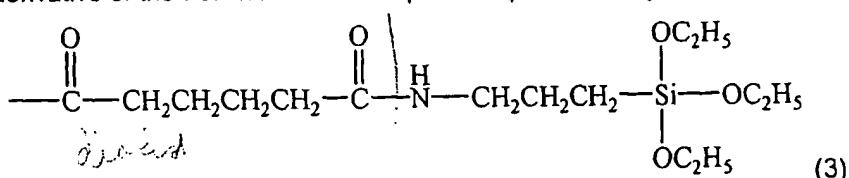
R_2 is selected from the group consisting of an alkylene of 1-30 carbon atoms, a heteroalkylene of 1-30 carbon atoms, an arylene of 6-20 carbon atoms, an arylalkylene of 6-20 carbon atoms, a heteroarylene of 6-30 carbon atoms, and a heteroarylalkylene of 6-30 carbon atoms, each of which is unsubstituted or substituted with a halogen, a hydroxyl, a nitro, a cyano, an amino, an amidino, a hydrazine, a hydrazone, carboxylic acid or a salt thereof, sulfonic acid or a salt thereof, phosphoric acid or a salt thereof, an alkyl of 1-20 carbon atoms, an alkenyl, an alkynyl, a heteroalkyl of 2-20 carbon atoms, an aryl of 6-20 carbon atoms, an arylalkyl of 6-30 carbon atoms, a heteroaryl of 6-30 carbon atoms, or a heteroarylalkyl of 6-30 carbon atoms;

R_3 is selected from the group consisting of an alkylene of 1-12 carbon atoms, an alkenylene or an alkynylene of 1-12 carbon atom, and an heteroalkylene of 1-12 carbon atoms, each of which is unsubstituted or substituted with a halogen, a hydroxyl, a nitro, a cyano, an amino, an amidino, a hydrazine, a hydrazone, carboxylic acid or a salt thereof, sulfonic acid or a salt thereof, phosphoric acid or a salt thereof, an alkyl of 1-20 carbon atoms, an alkenyl, an alkynyl, a heteroalkyl of 2-20 carbon atoms, an aryl of 6-20 carbon atoms, an arylalkyl of 6-30 carbon atoms, a heteroaryl of 6-30 carbon atoms, or a heteroarylalkyl of 6-30 carbon atoms;

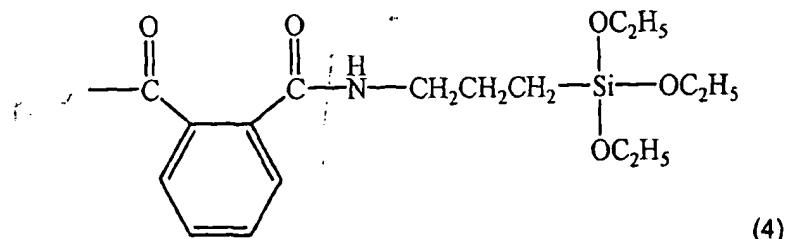
R_4 and R_5 are independently one of hydrogen, and an alkyl of 1-5 carbon atoms; and

R_6 is one of a hydrogen, a hydroxyl, and an alkoxy of 1-5 carbon atoms.

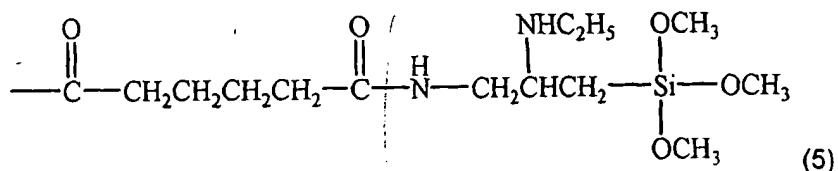
2. The water-soluble, antimicrobial active polymer according to claim 1, wherein the silane derivative of the Formula 2 is a compound represented by Formula 3:



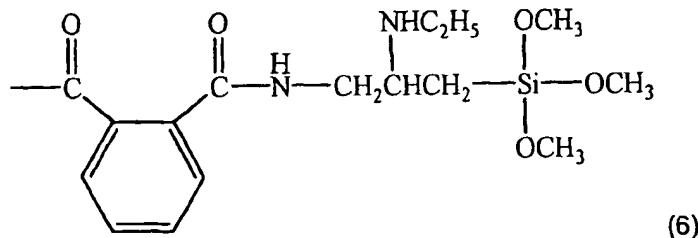
3. The water-soluble, antimicrobial active polymer according to claim 1, wherein the silane derivative of the Formula 2 is a compound represented by Formula 4:



4. The water-soluble, antimicrobial active polymer according to claim 1, wherein the silane derivative of the Formula 2 is a compound represented by Formula 5:



5. The water-soluble, antimicrobial active polymer according to claim 1, wherein the silane derivative of the Formula 2 is a compound represented by Formula 6:



6. An ink composition comprising:
a water-soluble, antimicrobial active polymer represented by Formula 1:

=> d his ful

(FILE 'HOME' ENTERED AT 08:13:23 ON 13 SEP 2005)

FILE 'HCAPLUS' ENTERED AT 08:13:30 ON 13 SEP 2005

E US20040106698/PN

L1 1 SEA ABB=ON PLU=ON US20040106698/PN
D ALL
SEL L1 RN

FILE 'REGISTRY' ENTERED AT 08:17:53 ON 13 SEP 2005

L2 7 SEA ABB=ON PLU=ON (124-04-9/BI OR 34977-63-4/BI OR
4051-63-2/BI OR 85-44-9/BI OR 85631-88-5/BI OR 9002-89-5/
BI OR 919-30-2/BI)
D SCAN
D L2 1-7 RN STR
E 9002-89-5/RN

L3 1 SEA ABB=ON PLU=ON 9002-89-5/RN
L4 641 SEA ABB=ON PLU=ON 9002-89-5/CRN

D SCAN L3

E 919-30-2/RN

L5 1 SEA ABB=ON PLU=ON 919-30-2/RN
D SCAN

L6 880 SEA ABB=ON PLU=ON 919-30-2/CRN
E 124-04-9/RN

L7 1 SEA ABB=ON PLU=ON 124-04-9/RN
D SCAN

L8 30821 SEA ABB=ON PLU=ON 124-04-9/CRN
E 85-44-9/RN

L9 1 SEA ABB=ON PLU=ON 85-44-9/RN
D SCAN

L10 10661 SEA ABB=ON PLU=ON 85-44-9/CRN
E 4051-63-2/RN

L11 1 SEA ABB=ON PLU=ON 4051-63-2/RN
D SCAN

L12 5 SEA ABB=ON PLU=ON 4051-63-2/CRN
D SCAN

L13 1 SEA ABB=ON PLU=ON 34977-63-4/RN
D SCAN

L14 0 SEA ABB=ON PLU=ON 34977-63-4/CRN
E 85631-88-5/RN

L15 1 SEA ABB=ON PLU=ON 85631-88-5/RN
D SCAN

L16 0 SEA ABB=ON PLU=ON 85631-88-5/CRN

FILE 'LREGISTRY' ENTERED AT 08:46:23 ON 13 SEP 2005

L17 STR

FILE 'REGISTRY' ENTERED AT 08:49:06 ON 13 SEP 2005

L18 50 SEA SSS SAM L17

FILE 'LREGISTRY' ENTERED AT 08:50:18 ON 13 SEP 2005

L19 STR

FILE 'REGISTRY' ENTERED AT 08:59:43 ON 13 SEP 2005

L20 14 SEA SSS SAM L17 AND L19

FILE 'LREGISTRY' ENTERED AT 09:01:09 ON 13 SEP 2005

L21 STR

FILE 'REGISTRY' ENTERED AT 09:02:20 ON 13 SEP 2005

L22 0 SEA SSS SAM L17 AND L19 AND L21

FILE 'LREGISTRY' ENTERED AT 09:20:37 ON 13 SEP 2005
 L23 STR L19

FILE 'REGISTRY' ENTERED AT 09:21:24 ON 13 SEP 2005
 L24 29 SEA SSS SAM L17 AND L23
 L25 1040 SEA SSS FUL L17 AND L23
 D QUE STAT L24
 SAV L25 SHO144/A
 D QUE STAT L21
 L26 0 SEA SUB=L25 SSS SAM L21
 L27 0 SEA SUB=L25 SSS FUL L21
 L28 0 SEA SUB=L25 SSS SAM (L17 AND L23 AND L21)
 L29 0 SEA ABB=ON PLU=ON L25 AND L4
 L30 0 SEA ABB=ON PLU=ON L25 AND L3
 D QUE STAT L25
 D QUE STAT L27
 D QUE STAT L21

FILE 'LREGISTRY' ENTERED AT 09:31:16 ON 13 SEP 2005
 L31 STR L21

FILE 'REGISTRY' ENTERED AT 09:31:41 ON 13 SEP 2005
 L32 0 SEA SUB=L25 SSS SAM L31
 D QUE STAT L27
 L33 2 SEA ABB=ON PLU=ON L25 AND SRU
 D SCAN
 D QUE L17
 D QUE STAT L18
 D QUE STAT L20
 L34 12651 SEA SSS FUL L17
 SAV L34 SHO144A/A
 E ETHENOL/CN
 L35 1 SEA ABB=ON PLU=ON ETHENOL/CN
 D SCAN
 D RN
 E 557-75-5/RN
 L36 1 SEA ABB=ON PLU=ON 557-75-5/RN
 D SCAN

FILE 'HCAPLUS' ENTERED AT 09:56:39 ON 13 SEP 2005
 L37 571 SEA ABB=ON PLU=ON L25
 L38 2534 SEA ABB=ON PLU=ON L36

FILE 'REGISTRY' ENTERED AT 09:57:33 ON 13 SEP 2005
 D SCAN L3

FILE 'HCAPLUS' ENTERED AT 09:57:34 ON 13 SEP 2005
 L39 59641 SEA ABB=ON PLU=ON L3
 L40 0 SEA ABB=ON PLU=ON L37 AND L38
 L41 7 SEA ABB=ON PLU=ON L37 AND L39
 D SCAN
 L42 0 SEA ABB=ON PLU=ON L1 AND L41
 D SCAN L41 TI

FILE 'REGISTRY' ENTERED AT 10:01:08 ON 13 SEP 2005
 L43 1 SEA ABB=ON PLU=ON L2 AND L34
 D SCAN

FILE 'HCAPLUS' ENTERED AT 10:02:23 ON 13 SEP 2005
 L44 23506 SEA ABB=ON PLU=ON L34
 L45 9 SEA ABB=ON PLU=ON L44 AND L38

L46 411 SEA ABB=ON PLU=ON L44 AND L39
D L46 1 HITSTR
L47 5 SEA ABB=ON PLU=ON L33
D 1-5 HITSTR
L48 60705 SEA ABB=ON PLU=ON ANTIMICROB? OR ANTI (A)MICROB?
L49 4 SEA ABB=ON PLU=ON L46 AND L48
D SCAN
L50 1 SEA ABB=ON PLU=ON L49 AND L1
D QUE STAT L19

FILE 'LREGISTRY' ENTERED AT 10:25:47 ON 13 SEP 2005
D QUE STAT
D QUE STAT L23
L51 STR L23

FILE 'REGISTRY' ENTERED AT 10:27:31 ON 13 SEP 2005

FILE 'LREGISTRY' ENTERED AT 10:28:25 ON 13 SEP 2005
L52 STR L51

FILE 'REGISTRY' ENTERED AT 10:29:28 ON 13 SEP 2005

FILE 'LREGISTRY' ENTERED AT 10:29:43 ON 13 SEP 2005
L53 STR L23

FILE 'REGISTRY' ENTERED AT 10:45:37 ON 13 SEP 2005
L54 50 SEA SSS SAM L53
L55 SCR 1842
L56 50 SEA SSS SAM L53 NOT L55
L57 SCR 1842 AND 1918
L58 50 SEA SSS SAM L53 NOT L57
L59 SCR 1842 AND 1918 AND 2016 AND 2022
L60 50 SEA SSS SAM L53 NOT L59
L61 SCR 1840 AND 1918 AND 2016 AND 2022 AND 1968 AND 1932
L62 50 SEA SSS SAM L53 NOT L61

FILE 'LREGISTRY' ENTERED AT 10:58:40 ON 13 SEP 2005
L63 STR L53

FILE 'REGISTRY' ENTERED AT 10:59:03 ON 13 SEP 2005
L64 50 SEA SSS SAM L63 NOT L61
L65 SCR 1840 AND 1918 AND 2016 AND 2021 AND 1968 AND 1932
L66 0 SEA SSS SAM L63 AND L65
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 11:08:20 ON 13 SEP 2005
L67 STR L63

FILE 'REGISTRY' ENTERED AT 11:08:57 ON 13 SEP 2005
L68 SCR 1840 AND 1918 AND 2016 AND 2022
L69 50 SEA SSS SAM L63 NOT L68
L70 50 SEA SSS SAM L63 NOT L65
L71 50 SEA SSS SAM L67 NOT L65

FILE 'LREGISTRY' ENTERED AT 11:13:09 ON 13 SEP 2005
L72 STR L67

FILE 'REGISTRY' ENTERED AT 11:14:26 ON 13 SEP 2005
L73 50 SEA SSS SAM L72 NOT L65
L74 SCR 1840 AND 1918 AND 2016 AND 2021
L75 50 SEA SSS SAM L72 NOT L74
L76 STR L63

FILE 'REGISTRY' ENTERED AT 11:17:05 ON 13 SEP 2005
L77 50 SEA SSS SAM L76 NOT L65
D QUE STAT
D QUE STAT L73
D QUE STAT L73

FILE 'LREGISTRY' ENTERED AT 12:55:27 ON 13 SEP 2005
L78 STR
L79 STR
L80 STR

FILE 'REGISTRY' ENTERED AT 12:58:29 ON 13 SEP 2005
L81 50 SEA SSS SAM (L78 OR L79 OR L80) NOT L74
L82 50 SEA SSS SAM (L78 OR L79 OR L80) NOT L65
L83 SCREEN 1839
L84 50 SEA SSS SAM (L78 OR L79 OR L80) NOT L83
D QUE STAT L77

FILE 'LREGISTRY' ENTERED AT 13:07:32 ON 13 SEP 2005
L85 STR L76
L86 STR L85

FILE 'REGISTRY' ENTERED AT 13:12:36 ON 13 SEP 2005
D QUE STAT L84
D QUE STAT L80
D QUE STAT L81
E A/PCT
L87 SCR 1841 OR 2016 OR 2021
L88 50 SEA SSS SAM (L78 OR L79 OR L80) NOT L87

FILE 'LREGISTRY' ENTERED AT 13:26:58 ON 13 SEP 2005
L89 STR L80

FILE 'REGISTRY' ENTERED AT 13:27:59 ON 13 SEP 2005
L90 50 SEA SSS SAM (L78 OR L79 OR L89) NOT L87
D QUE STAT
L91 SCR 1840 OR 2016 OR 2021 OR 1968 OR 1932 OR 2026 OR 1926
L92 SCR 1841 OR 2016 OR 2021 OR 1968 OR 1932 OR 2026 OR 1926
L93 50 SEA SSS SAM (L78 OR L79 OR L89) NOT L92
L94 50 SEA SSS SAM (L78 OR L79 OR L89) NOT L91
D QUE STAT L88
D QUE STAT L90
D QUE STAT L93
D QUE STAT L94

L95 528365 SEA SSS FUL (L78 OR L79 OR L89) NOT L87
D SAV

L96 170265 SEA ABB=ON PLU=ON L95 AND SEQ/FA
L97 358100 SEA ABB=ON PLU=ON L95 NOT L96
SAV TEMP L97 SHO144B/A
E PVA/PCT
E PVA ?/PCT
E PVA F/PCT
E PUR/PCT
E P /PCT

FILE 'HCAPLUS' ENTERED AT 14:05:26 ON 13 SEP 2005

FILE 'REGISTRY' ENTERED AT 14:10:10 ON 13 SEP 2005
E PVA/PCT
E PU/PCT
E VPA/PCT

E PVA/PCT
 E POLYVI/PCT
 E VINYL/PCT
 E A/PCT
 L98 4199 SEA ABB=ON PLU=ON 557-75-5/CRN
 L99 314 SEA ABB=ON PLU=ON L25 AND L97
 L100 0 SEA ABB=ON PLU=ON L99 AND (L3 OR L4 OR L98 OR L36)

 FILE 'HCAPLUS' ENTERED AT 14:19:28 ON 13 SEP 2005
 L101 142 SEA ABB=ON PLU=ON L99
 D QUE STAT L46

 FILE 'REGISTRY' ENTERED AT 14:23:27 ON 13 SEP 2005
 E PVA/PCT
 E PV/PCT
 L102 173903 SEA ABB=ON PLU=ON PVIN/PCT
 L103 38853 SEA ABB=ON PLU=ON L102 AND L97
 D QUE STAT L99

 FILE 'HCAPLUS' ENTERED AT 14:32:45 ON 13 SEP 2005
 L104 52373 SEA ABB=ON PLU=ON L103
 L105 63 SEA ABB=ON PLU=ON L104 AND L38
 L106 2261 SEA ABB=ON PLU=ON L104 AND L39

 FILE 'REGISTRY' ENTERED AT 14:47:47 ON 13 SEP 2005
 L107 358100 SEA ABB=ON PLU=ON L97 OR L97
 D L107 175,000 RN
 D L107 90000 RN
 D L107 180000 RN
 D L107 270000 RN
 L108 269999 SEA RAN=(69720-98-8,) ABB=ON PLU=ON L97 OR L97
 L109 88101 SEA ABB=ON PLU=ON L107 NOT L108
 L110 90000 SEA RAN=(210432-44-3,) ABB=ON PLU=ON L97 OR L97
 L111 268100 SEA ABB=ON PLU=ON L107 NOT L110
 L112 179999 SEA ABB=ON PLU=ON L107 NOT (L109 OR L110)
 D L112 90000 RN
 L113 90000 SEA RAN=(125260-19-7,) ABB=ON PLU=ON L107 NOT (L109 OR L110)
 L114 89999 SEA ABB=ON PLU=ON L112 NOT L113

 FILE 'HCAPLUS' ENTERED AT 15:08:45 ON 13 SEP 2005
 L115 707384 SEA ABB=ON PLU=ON L109
 L116 34736 SEA ABB=ON PLU=ON L110
 L117 48955 SEA ABB=ON PLU=ON L113
 L118 96628 SEA ABB=ON PLU=ON L114
 L119 134 SEA ABB=ON PLU=ON L46 AND ((L115 OR L116 OR L117 OR L118))
 L120 3540 SEA ABB=ON PLU=ON L44 AND ((L115 OR L116 OR L117 OR L118))
 D L120 1-10 HITSTR
 L121 5 SEA ABB=ON PLU=ON L120 AND L36
 L122 169 SEA ABB=ON PLU=ON L120 AND L98
 D 1-5 HITSTR
 L123 134 SEA ABB=ON PLU=ON L120 AND L3
 L124 2 SEA ABB=ON PLU=ON L120 AND L4
 L125 7 SEA ABB=ON PLU=ON L121 OR L124
 L126 134 SEA ABB=ON PLU=ON L119 OR L123
 L127 169 SEA ABB=ON PLU=ON L126 OR L122
 L128 1 SEA ABB=ON PLU=ON L127 AND L48
 D SCAN
 L129 272659 SEA ABB=ON PLU=ON INK?/SC,SX
 L130 52 SEA ABB=ON PLU=ON L127 AND L129

D QUE STAT L3

FILE 'REGISTRY' ENTERED AT 15:30:55 ON 13 SEP 2005

 D SCAN L5
 D SCAN L7
 D SCAN L13
 D SCAN L15

FILE 'HCAPLUS' ENTERED AT 15:34:22 ON 13 SEP 2005

 D QUE STAT L45
 D QUE STAT L41

L131 5 SEA ABB=ON PLU=ON L41 AND ((L115 OR L116 OR L117 OR L118))
 L132 5 SEA ABB=ON PLU=ON L45 AND ((L115 OR L116 OR L117 OR L118))
 L133 1 SEA ABB=ON PLU=ON L49 AND ((L115 OR L116 OR L117 OR L118))
 L134 1650 SEA ABB=ON PLU=ON L4
 L135 9706 SEA ABB=ON PLU=ON L5
 L136 734 SEA ABB=ON PLU=ON L6
 L137 13329 SEA ABB=ON PLU=ON L7
 L138 47424 SEA ABB=ON PLU=ON L8
 L139 14297 SEA ABB=ON PLU=ON L9
 L140 8588 SEA ABB=ON PLU=ON L10
 L141 25 SEA ABB=ON PLU=ON L7 AND L5
 L142 1 SEA ABB=ON PLU=ON L141 AND L39
 L143 0 SEA ABB=ON PLU=ON L141 AND L134
 L144 5 SEA ABB=ON PLU=ON L141 AND L138
 L145 1 SEA ABB=ON PLU=ON L141 AND L98
 L146 54 SEA ABB=ON PLU=ON L135 AND L139
 L147 0 SEA ABB=ON PLU=ON L146 AND L38
 L148 0 SEA ABB=ON PLU=ON L146 AND L134
 L149 3 SEA ABB=ON PLU=ON L146 AND L136
 L150 2 SEA ABB=ON PLU=ON L146 AND L98
 L151 25 SEA ABB=ON PLU=ON L135 AND L137
 L152 1 SEA ABB=ON PLU=ON L151 AND (L38 OR L39 OR L134 OR L98))

 L153 72663 SEA ABB=ON PLU=ON L98
 L154 5 SEA ABB=ON PLU=ON (L135 OR L136) AND (L137 OR L138 OR L139 OR L140) AND (L39 OR L134 OR L38 OR L153)
 L155 17 SEA ABB=ON PLU=ON L131 OR L132 OR L133 OR L142 OR L145 OR L149 OR L150 OR L152 OR L154
 D QUE L49
 D QUE L47
 L156 75 SEA ABB=ON PLU=ON L130 OR L155 OR L125 OR L47 OR L49
 L157 23 SEA ABB=ON PLU=ON L156 NOT L130
 L158 5 S L157 AND L129

=> => d que stat l130

 L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9002-89-5/RN
 L17 STR

5

O

~

N-~G1-~Si-~O

1 2 3 4

VAR G1=AK/CY

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L34 12651 SEA FILE=REGISTRY SSS FUL L17
L39 59641 SEA FILE=HCAPLUS ABB=ON PLU=ON L3
L44 23506 SEA FILE=HCAPLUS ABB=ON PLU=ON L34
L46 411 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 AND L39
L78 STR
COOH 2 COOH 1

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE

L79 STR
C1—C=O C1—C=O
1 2 3 4 5 6

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L87 SCR 1841 OR 2016 OR 2021
L89 STR
O=C O=C O=C O=C
1 2 3 4 5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L95 528365 SEA FILE=REGISTRY SSS FUL (L78 OR L79 OR L89) NOT L87
L96 170265 SEA FILE=REGISTRY ABB=ON PLU=ON L95 AND SEQ/FA
L97 358100 SEA FILE=REGISTRY ABB=ON PLU=ON L95 NOT L96
L98 4199 SEA FILE=REGISTRY ABB=ON PLU=ON 557-75-5/CRN
L107 358100 SEA FILE=REGISTRY ABB=ON PLU=ON L97 OR L97
L108 269999 SEA FILE=REGISTRY RAN=(69720-98-8,) ABB=ON PLU=ON L97
OR L97
L109 88101 SEA FILE=REGISTRY ABB=ON PLU=ON L107 NOT L108
L110 90000 SEA FILE=REGISTRY RAN=(210432-44-3,) ABB=ON PLU=ON L97
OR L97

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L112    179999 SEA FILE=REGISTRY ABB=ON  PLU=ON  L107 NOT (L109 OR
          L110)
L113    90000 SEA FILE=REGISTRY RAN=(125260-19-7,) ABB=ON  PLU=ON
          L107 NOT (L109 OR L110)
L114    89999 SEA FILE=REGISTRY ABB=ON  PLU=ON  L112 NOT L113
L115    707384 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L109
L116    34736 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L110
L117    48955 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L113
L118    96628 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L114
L119    134 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46 AND ((L115 OR L116
          OR L117 OR L118))
L120    3540 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L44 AND ((L115 OR L116
          OR L117 OR L118))
L122    169 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L120 AND L98
L123    134 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L120 AND L3
L126    134 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L119 OR L123
L127    169 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L126 OR L122
L129    272659 SEA FILE=HCAPLUS ABB=ON  PLU=ON  INK?/SC,SX
L130    52 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L127 AND L129

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=> d l130 1-52 cbib abs hitstr hitind

L130 ANSWER 1 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2005:523367 Document No. 143:61001 Gas barrier laminates and packaging
 articles with good strength and transparency. Oshita, Tatsuya;
 Uehara, Goki; Nakahara, Atsuhiro; Kazeto, Osamu; Shibata, Manabu;
 Miyamoto, Takehiro (Kuraray Co., Ltd., Japan). PCT Int. Appl. WO
 2005053954 A1 20050616, 84 pp. DESIGNATED STATES: W: AE, AG, AL,
 AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU,
 CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU,
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
 MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT,
 RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
 US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI,
 CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR,
 NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2.
 APPLICATION: WO 2004-JP17874 20041201. PRIORITY: JP 2003-403891
 20031203; JP 2004-235697 20040813.

AB Title laminates showing good oxygen barrier property in high
 humidity and after retort treatment have a base material and a layer
 laminated on ≥ 1 surface of the base material, wherein the
 layer comprises a composition comprising a hydrolysis condensate of
 ≥ 1 compound containing a metal atom having ≥ 1 group selected
 from a halogen atom and an alkoxy group bonded thereto and a
 neutralized product from a polymer containing ≥ 1 functional group
 selected from a carboxyl group and a carboxylic acid anhydride
 group, where at least a part of the COO group contained in the above
 ≥ 1 functional group is neutralized with a metal ion with
 valence ≥ 2 . Thus, 68.4 parts tetramethoxysilane and 13.6
 parts γ -glycidoxypropyltrimethoxysilane were hydrolytically
 condensated, 634 parts 10% partially neutralized polyacrylic acid
 with ammonia, applied on an anchor coat-coated Lumirror film, dried
 at 80° for 5 min, aged at 50° for 3 days, and
 heat-treated at 200° for 5 min to give a gas barrier
 laminate, which was soaked in an aqueous solution containing calcium acetate,
 washed, and dried to give a test piece with oxygen permeability 0.4
 $\text{cm}^3/\text{m}^2 \cdot \text{day} \cdot \text{atm}$ at 65% RH, 0.5
 $\text{cm}^3/\text{m}^2 \cdot \text{day} \cdot \text{atm}$ at 95% RH, and >0.2
 $\text{cm}^3/\text{m}^2 \cdot \text{day} \cdot \text{atm}$ after retort treatment, good appearance
 and drop resistance, tensile strength 140 MPa, and tensile
 elongation 220%.

IT 9002-89-5, PVA 105

RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (blend with partially neutralized polyacrylic acid and silane condensate, barrier layer; gas barrier laminates and packaging articles with good strength and transparency)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

 $\text{H}_2\text{C}=\text{CH}-\text{OH}$ IT 168269-73-6P, γ -Aminopropyltrimethoxysilane-tetramethoxysilane copolymer 853105-44-9P

853105-49-4P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (blend with partially neutralized polyacrylic acid, barrier layer; gas barrier laminates and packaging articles with good strength and transparency)

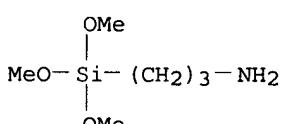
RN 168269-73-6 HCAPLUS

CN Silicic acid (H_4SiO_4), tetramethyl ester, polymer with 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 13822-56-5

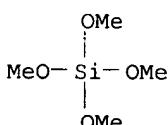
CMF C6 H17 N O3 Si



CM 2

CRN 681-84-5

CMF C4 H12 O4 Si



RN 853105-44-9 HCAPLUS

CN D-Gluconamide, N-[3-(triethoxysilyl)propyl]-, polymer with silicic

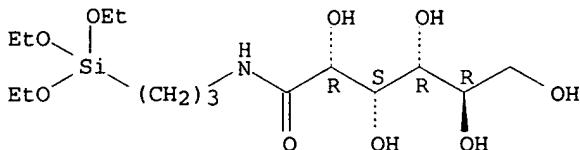
acid (H₄SiO₄) tetramethyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 104275-58-3

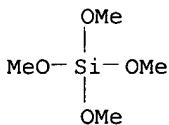
CMF C₁₅ H₃₃ N O₉ Si

Absolute stereochemistry.



CM 2

CRN 681-84-5

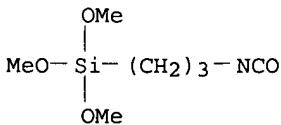
CMF C₄ H₁₂ O₄ Si

RN 853105-49-4 HCPLUS

CN Silicic acid (H₄SiO₄), tetramethyl ester, polymer with
(3-isocyanatopropyl)trimethoxysilane (9CI) (CA INDEX NAME)

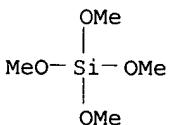
CM 1

CRN 15396-00-6

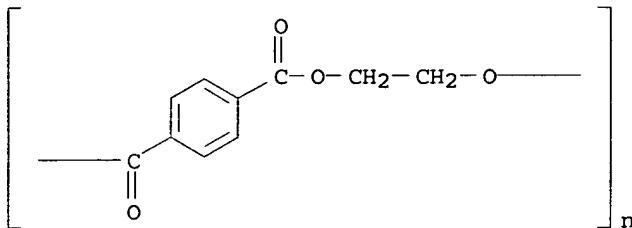
CMF C₇ H₁₅ N O₄ Si

CM 2

CRN 681-84-5

CMF C₄ H₁₂ O₄ Si

IT 25038-59-9, Lumirror, uses
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (substrate; gas barrier laminates and packaging articles with good strength and transparency)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



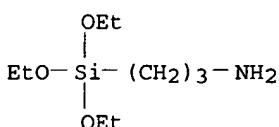
IC ICM B32B027-30
 ICS C08J007-12
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42
 IT 9002-89-5, PVA 105 9005-25-8, Starch, uses
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (blend with partially neutralized polyacrylic acid and silane condensate, barrier layer; gas barrier laminates and packaging articles with good strength and transparency)
 IT 56325-93-0P, γ -Glycidoxypropyltrimethoxysilane homopolymer
 104814-61-1P, γ -Glycidoxypropyltrimethoxysilane-tetramethoxysilane copolymer 113923-91-4P 168269-73-6P,
 γ -Aminopropyltrimethoxysilane-tetramethoxysilane copolymer 188679-76-7P, 3-Chloropropyltrimethoxysilane-tetramethoxysilane copolymer 853105-44-9P 853105-49-4P
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (blend with partially neutralized polyacrylic acid, barrier layer; gas barrier laminates and packaging articles with good strength and transparency)
 IT 25038-59-9, Lumirror, uses
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (substrate; gas barrier laminates and packaging articles with good strength and transparency)

L130 ANSWER 2 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2005:348842 Document No. 142:393921 Method and composition for
 treating metal surfaces using polymer blend and an organo-functional
 silane. Rivera, Jose B.; Schellenger, Norman H. (USA). U.S. Pat.
 Appl. Publ. US 2005084616 A1 20050421, 8 pp. (English). CODEN:
 USXXCO. APPLICATION: US 2003-690349 20031021.

AB A method and composition for treating metal surfaces improves the paint adhesion of the metal surface, particularly its resistance to delamination of paint over a stressed area in the finished metal

upon exposure to hot water. The composition is an aqueous composition of an organo-functional silane, a compound of a group IV-B element, and a polymer blend having a plurality of carboxylic functional groups and hydroxyl groups, wherein the polymer blend is preferably a mixture of Me vinyl ether-maleic acid copolymer and polyvinyl alc; and the organo-functional silane is preferably an epoxy silane. The method includes contacting a metal surface, such as aluminum, with the composition

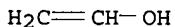
IT 919-30-2, Aminopropyltriethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (Silwet A 1100; method and composition for treating metal surfaces using polymer blend and an organo-functional silane)
 RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5, Polyvinyl alcohol
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (blend with Me vinyl ether-maleic acid copolymer; method and composition for treating metal surfaces using polymer blend and an organo-functional silane)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

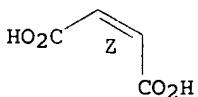


IT 25153-40-6, Methyl vinyl ether-maleic acid copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (blend with polyvinyl alc.; method and composition for treating metal surfaces using polymer blend and an organo-functional silane)
 RN 25153-40-6 HCPLUS
 CN 2-Butenedioic acid (2Z)-, polymer with methoxyethene (9CI) (CA INDEX NAME)

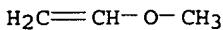
CM 1

CRN 110-16-7
 CMF C4 H4 O4

Double bond geometry as shown.



CM 2

CRN 107-25-5
CMF C3 H6 O

IC ICM C08L001-00
 INCL 427331000; 524522000; 524524000; 524262000
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55, 56
 IT 919-30-2, Aminopropyltriethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (Silwet A 1100; method and composition for treating metal surfaces
 using polymer blend and an organo-functional silane)
 IT 9002-89-5, Polyvinyl alcohol
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (blend with Me vinyl ether-maleic acid copolymer; method and
 composition for treating metal surfaces using polymer blend and an
 organo-functional silane)
 IT 9003-01-4, Polyacrylic acid 25153-40-6, Methyl vinyl
 ether-maleic acid copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (blend with polyvinyl alc.; method and composition for treating metal
 surfaces using polymer blend and an organo-functional silane)

L130 ANSWER 3 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2004:740516 Document No. 141:246953 Coating of metal surfaces with a
 mixture containing at least two silanes. Walter, Manfred; Schoene,
 Axel; Jung, Christian; Brown, Kevin; Kolberg, Thomas; Kliehm,
 Norbert (Chemetall G.m.b.H., Germany). PCT Int. Appl. WO 2004076718
 A1 20040910, 53 pp. DESIGNATED STATES: W: AE, AE, AG, AL, AL, AM,
 AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ,
 BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK,
 DM, DZ, EC, EC, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM,
 HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP,
 KR, KR, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG,
 MK, MN, MW, MX, MX, MZ, MZ, NA, NI; RW: AT, BE, BF, BJ, CF, CG, CH,
 CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR,
 NE, NL, PT, SE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, ML, MR, NE,
 SN, TD, TG, TR. (German). CODEN: PIXXD2. APPLICATION: WO
 2004-EP1830 20040225. PRIORITY: DE 2003-10308237 20030225; DE
 2003-10332744 20030717.

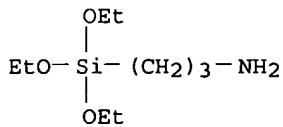
AB The invention relates to a method for coating a metal surface with
 an aqueous composition, which contains optionally an organic solvent as well as
 other constituents, for pretreating before coating or for treating
 of the metal surface. The composition contains, in addition to water: (a)
 ≥ 1 hydrolyzable and/or at least partially hydrolyzed F-free
 silane, and (b) \geq hydrolyzable and/or at least partially
 hydrolyzed F-containing silane. The silanes are water-soluble in the
 composition or are water-soluble, in particular, due to (addnl.) hydrolysis
 reactions and/or chemical reactions before application to the metal
 surface.

IT 919-30-2, γ -Aminopropyltriethoxy silane
 1760-24-3, N-(3-(Trimethoxysilyl)propyl)ethylenediamine
 3069-29-2, Aminoethylaminopropylmethyldimethoxy silane

4693-51-0 5089-72-5, N- β -(Aminoethyl)- γ -aminopropyltriethoxy silane 9002-89-5, Polyvinyl alcohol
 13497-18-2, Bis(trimethoxysilylpropyl)amine
 13822-56-5, γ -Aminopropyltrimethoxy silane
 25608-40-6, Poly(L-aspartic acid) 35141-30-1
 70240-34-5 82985-35-1,
 Bis(trimethoxysilylpropyl)amine 153070-99-6
 750589-50-5 750589-52-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (in coating of metal surfaces with mixture containing at least two silanes)

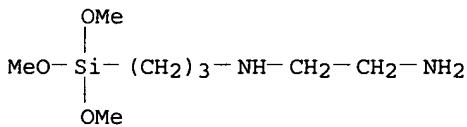
RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



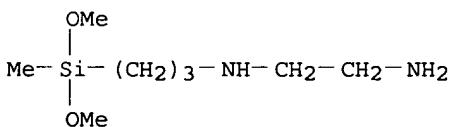
RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



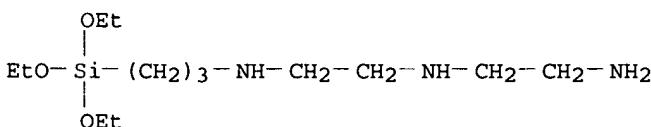
RN 3069-29-2 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA INDEX NAME)



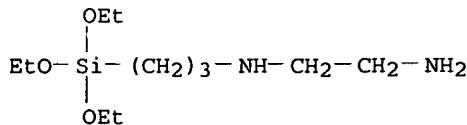
RN 4693-51-0 HCAPLUS

CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-(3-(triethoxysilyl)propyl)- (9CI) (CA INDEX NAME)



RN 5089-72-5 HCAPLUS

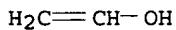
CN 1,2-Ethanediamine, N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



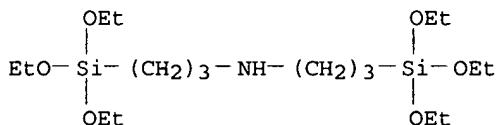
RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

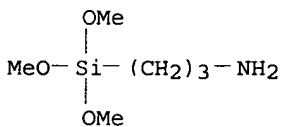
CRN 557-75-5
 CMF C2 H4 O



RN 13497-18-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)-N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 13822-56-5 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

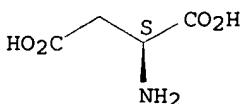


RN 25608-40-6 HCAPLUS
 CN L-Aspartic acid, homopolymer (9CI) (CA INDEX NAME)

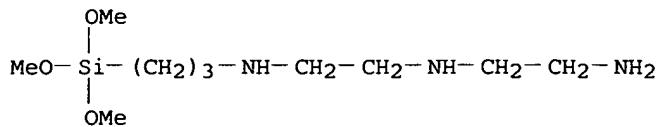
CM 1

CRN 56-84-8
 CMF C4 H7 N O4

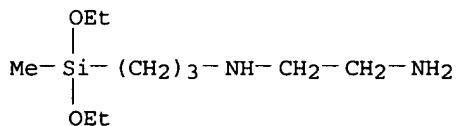
Absolute stereochemistry. Rotation (+).



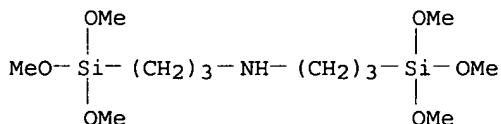
RN 35141-30-1 HCAPLUS
 CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-(3-(trimethoxysilyl)propyl)- (9CI) (CA INDEX NAME)



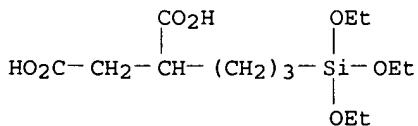
RN 70240-34-5 HCAPLUS
 CN 1,2-Ethanediamine, N-[3-(diethoxymethylsilyl)propyl]- (9CI) (CA INDEX NAME)



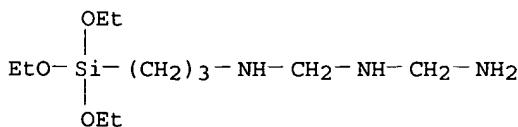
RN 82985-35-1 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



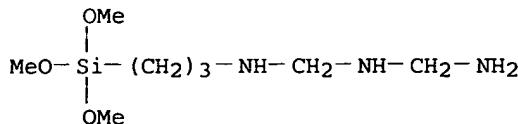
RN 153070-99-6 HCAPLUS
 CN Butanedioic acid, [3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 750589-50-5 HCAPLUS
 CN Methanediamine, N-(aminomethyl)-N'-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 750589-52-7 HCAPLUS
 CN Methanediamine, N-(aminomethyl)-N'-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IC ICM C23C022-68
 ICS C23C022-50; C23C022-53; C23C022-83; C09D005-08
 CC 56-6 (Nonferrous Metals and Alloys)
 Section cross-reference(s): 42
 IT 379-50-0, Triphenylfluorosilane 919-30-2,
 γ -Aminopropyltriethoxy silane 1760-24-3,
 N-(3-(Trimethoxysilyl)propyl)ethylenediamine 2530-83-8,
 3-Glycidoxypropyltrimethoxy silane 2530-85-0, 3-
 Methacryloxypropyltrimethoxy silane 2602-34-8,
 3-Glycidoxypropyltriethoxy silane 3069-29-2,
 Aminoethylaminopropylmethyldimethoxy silane 3388-04-3,
 β -(3,4-Epoxypropyl)ethyltrimethoxy silane 4073-92-1,
 (3,4-Epoxybutyl)triethoxy silane 4130-08-9, Vinyltriacetoxy silane
 4693-51-0 5089-72-5, N- β -(Aminoethyl)- γ -
 aminopropyltriethoxy silane 7335-84-4, (3,4-
 Epoxybutyl)trimethoxysilane 9002-89-5, Polyvinyl alcohol
 9002-98-6, Polyethylenimine 9003-39-8, Polyvinyl pyrrolidone
 10217-34-2, β -(3,4-Epoxypropyl)ethyltriethoxy silane
 13497-18-2, Bis(trimethoxysilylpropyl)amine
 13822-56-5, γ -Aminopropyltrimethoxy silane
 21142-29-0, 3-Methacryloxypropyltriethoxy silane 25608-40-6
 , Poly(L-aspartic acid) 26063-13-8, Poly(L-aspartic acid), SRU
 26115-70-8, Tris(3-(trimethoxysilyl)propyl)isocyanurate
 33684-79-6, 3-(3,4-Epoxypropyl)propyltrimethoxy silane
 35141-30-1 59269-51-1, Polyvinyl phenol 70240-34-5
 72490-26-7 82194-46-5, Tris(3-(triethoxysilyl)propyl)isocyanurate
 82985-35-1, Bis(trimethoxysilylpropyl)amine 88927-91-7
 153070-99-6 156183-90-3, 3-(3,4-
 Epoxypropyl)propyltriethoxy silane 750589-50-5
 750589-52-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (in coating of metal surfaces with mixture containing at least two
 silanes)

L130 ANSWER 4 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2004:513017 Document No. 141:73203 Producing a coated substrate using
 curtain coating method. Urscheler, Robert; Roper, John A.;
 Salminen, Pekka J.; Dobler, Francis (Switz.). U.S. Pat. Appl. Publ.
 US 2004121080 A1 20040624, 17 pp., Cont.-in-part of U.S. Pat. Appl.
 2003 194,501. (English). CODEN: USXXXCO. APPLICATION: US
 2003-691890 20031016. PRIORITY: US 2002-2002/273866 20021017.

AB The method of producing a coated substrate comprises the steps of
 (a) forming a free flowing curtain, the curtain having ≥ 1
 component capable of reacting, and (b) contacting the curtain with a
 continuous web substrate (e.g. paper).

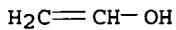
IT 9002-89-5, Polyvinyl alcohol
 RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or
 engineered material use); RACT (Reactant or reagent); USES (Uses)
 (Mowiol 6-98; binder for producing a coated substrate using
 curtain coating method)

RN 9002-89-5 HCAPLUS

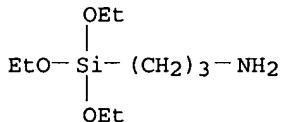
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



IT 919-30-2, 3-Aminopropyltriethoxysilane
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(binder for producing a coated substrate using curtain coating method)
RN 919-30-2 HCAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9011-13-6, Styrene-maleic anhydride copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(latex; binder for producing a coated substrate using curtain coating method)
RN 9011-13-6 HCAPLUS
CN 2,5-Furandione, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

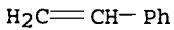
CM 1

CRN 108-31-6
CMF C4 H2 O3



CM 2

CRN 100-42-5
CMF C8 H8



IC ICM B05D001-36
ICS B05D001-30
INCL 427420000; 427402000
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 42
IT 9002-89-5, Polyvinyl alcohol
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(Mowiol 6-98; binder for producing a coated substrate using

curtain coating method)

IT 919-30-2, 3-Aminopropyltriethoxysilane 2602-34-8,
3-Glycidyloxypropyltriethoxysilane
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT
(Reactant or reagent); USES (Uses)
(binder for producing a coated substrate using curtain coating
method)

IT 9011-13-6, Styrene-maleic anhydride copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered
material use); USES (Uses)
(latex; binder for producing a coated substrate using curtain
coating method)

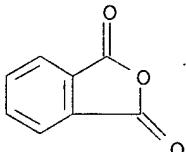
L130 ANSWER 5 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
2004:451644 Document No. 141:8729 Water-soluble, antimicrobial active
polymer and ink composition comprising the same. Lee, Kyung-Hoon;
Ryu, Seung-Min; Jung, Yeon-Kyoung (Samsung Electronics Co., Ltd., S.
Korea). U.S. Pat. Appl. Publ. US 2004106698 A1 20040603, 10 pp.
(English). CODEN: USXXCO. APPLICATION: US 2003-647144 20030825.
PRIORITY: KR 2002-51157 20020828.

AB A water-soluble, antimicrobial active polymer and an ink composition are
prepared by coupling an antimicrobial active silane compound to a branch
of polyvinyl alc. An excellent antimicrobial effect is provided
without affecting the properties of the ink composition that includes the
polymer. The polymer is added to the ink composition in an amount of 1 to
10 parts by weight based on 100 parts by weight of the ink composition. The ink
composition provides extended storage stability due to no coagulation,
effective antimicrobial effect even in a printed picture, and no
irritation to human skin.

IT 85-44-9DP, Phthalic anhydride, reaction products with
3-aminopropyl triethoxysilane and polyvinylalc. 124-04-9DP
, Adipic acid, reaction products with 3-aminopropyl triethoxysilane
and polyvinylalc. 919-30-2DP, 3-Aminopropyl
triethoxysilane, reaction products with adipic acid and
polyvinylalc. 9002-89-5DP, Polyvinylalcohol, reaction
products with 3-aminopropyl triethoxysilane and adipic acid
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
PREP (Preparation); USES (Uses)
(water-soluble, antimicrobial active polymer and ink composition
comprising the same)

RN 85-44-9 HCAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



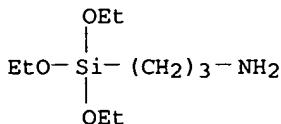
RN 124-04-9 HCAPLUS

CN Hexanedioic acid (9CI) (CA INDEX NAME)

$\text{HO}_2\text{C}-(\text{CH}_2)_4-\text{CO}_2\text{H}$

RN 919-30-2 HCAPLUS

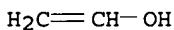
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IC ICM C08K003-00
 ICS C03C017-00; C09D005-00; C08F030-08
 INCL 523160000; 523161000; 526279000; 523122000
 CC 42-12 (Coatings, Inks, and Related Products)
 IT 85-44-9DP, Phthalic anhydride, reaction products with
 3-aminopropyl triethoxysilane and polyvinylalc. 124-04-9DP
 , Adipic acid, reaction products with 3-aminopropyl triethoxysilane
 and polyvinylalc. 919-30-2DP, 3-Aminopropyl
 triethoxysilane, reaction products with adipic acid and
 polyvinylalc. 9002-89-5DP, Polyvinylalcohol, reaction
 products with 3-aminopropyl triethoxysilane and adipic acid
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
 PREP (Preparation); USES (Uses)
 (water-soluble, antimicrobial active polymer and ink composition
 comprising the same)

L130 ANSWER 6 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2003:907176 Document No. 139:382857 Primer antifouling compositions
 for ships, multilayer antifouling coatings for ships, and
 antifouling method for exterior plates of ships. Masuda, Hiroshi;
 Suetsugu, Yasuaki (Chugoku Marine Paints, Ltd., Japan). Jpn. Kokai
 Tokkyo Koho JP 2003327912 A2 20031119, 31 pp. (Japanese). CODEN:
 JKXXAF. APPLICATION: JP 2002-131865 20020507.

AB Title compns. comprise resin components and reactive functional
 group-containing silane coupling agents, where the resin components are
 graft copolymers comprising vinyl type main chain polymers and
 branched polymers of organopolysiloxanes or organopolysiloxane and
 polyoxyalkylene-containing graft copolymers. Thus, a primer comprising
 X 24-798A graft acrylic polysiloxane 23.0, Denka Vinyl 1000GSK 5.0,
 KBM 403 coupling agent 2.0, Tipaque CR 50 10.0, NKK-F talc 3.0,
 Alpaste 1900X 10.0, Disparlon 4200-20 3.0, xylene 25.0, and Me
 iso-Bu ketone 25.0 parts was applied on a zinc-rich primer and
 anticorrosive coat-coated cold rolled steel sheet, an antifouling
 coating composition comprising X 22-8009 graft vinyl polysiloxane 60.0,
 KF 353 polyether-modified silicone oil 15.0, iso-Pr alc. 10.0,
 xylene 13.0, Me isobutylketone 2.0, and di-Bu tin dilaurate 0.1
 parts was applied thereon and dried at room temperature for 1 mo to give a
 test piece with good marine species antifouling and adhesion.

IT 625110-58-9P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES
 (Uses)

(blend with graft polysiloxane; primer antifouling compns. for ships)

RN 625110-58-9 HCPLUS

CN Hexanedioic acid, polymer with Epikote 1001X70 and 1,6-hexanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 157857-06-2

CMF Unspecified

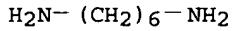
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 124-09-4

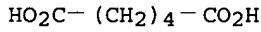
CMF C6 H16 N2



CM 3

CRN 124-04-9

CMF C6 H10 O4



IT 25086-48-0, Denka Vinyl 1000GSK

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(blend with graft polysiloxane; primer antifouling compns. for ships)

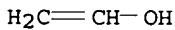
RN 25086-48-0 HCPLUS

CN Acetic acid ethenyl ester, polymer with chloroethene and ethenol (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



CM 2

CRN 108-05-4

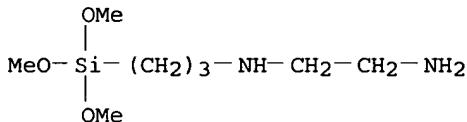
CMF C4 H6 O2



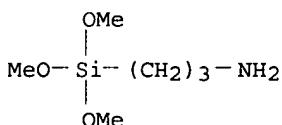
CM 3

CRN 75-01-4
CMF C2 H3 ClH₂C=CH-Cl

IT 1760-24-3, KBM 603 13822-56-5, KBM 903
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; primer antifouling compns. for ships)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IC ICM C09D183-10
 ICS B05D005-00; B05D007-14; B63B059-04; C08F290-14; C09D005-00;
 C09D005-08; C09D005-16; C09D127-06; C09D153-00; C09D157-00;
 C09D163-00; C09D183-04
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 625110-58-9P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES
 (Uses)
 (blend with graft polysiloxane; primer antifouling compns. for
 ships)
 IT 25086-48-0, Denka Vinyl 1000GSK
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (blend with graft polysiloxane; primer antifouling compns. for
 ships)
 IT 1760-24-3, KBM 603 2530-83-8, KBM 403 2768-02-7, KBM
 1003 13822-56-5, KBM 903
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; primer antifouling compns. for ships)

L130 ANSWER 7 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2003:771402 Document No. 139:278077 Gas barrier coating composition
 and manufacturing coating and packaging. Shiho, Hiroshi; Kawahara,
 Kouji; Ishikawa, Satoshi; Kanamori, Tarou; Nishikawa, Akira (JSR
 Corporation, Japan). Eur. Pat. Appl. EP 1348747 A1 20031001, 5 pp.
 DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,

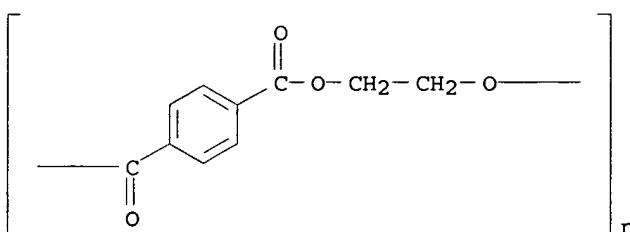
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-6957 20030326. PRIORITY: JP 2002-88715 20020327.

AB A gas barrier coating composition comprises (a) a polyvinyl alc., (b) a metal alcohalate $R_1mM(OR_2)_n$ ($M = Ti, Zr, or Al$; $R_1 = C_{1-8}$ organic group, $R_2 = C_{1-5}$ alkyl, C_{1-6} acyl, or Ph; and m and $n \geq 0$, with $m + n$ representing the valence of M), a hydrolyzate, condensate, or chelate compound of the metal alcohalate, a hydrolyzate or condensate of the metal chelate compound, a metal acylate $R_1mM(OR_2)_n$, a hydrolyzate or condensate of the metal acylate, and (c) an organosilane $R_3pSi(OR_4)_{4-p}$ ($R_3 = C_{1-8}$ organic group; $R_4 = C_{1-5}$ alkyl, C_{1-6} acyl, or Ph; $p = 0-2$), a hydrolyzate or condensate of the organosilane. The composition can produce a coating exhibiting very small O permeability under high humidity conditions, exhibiting superior adhesion to substrates, being nontoxic to humans, and useful as a packaging material for medical supplies, foods, cosmetics, cigarettes, and toiletries. The substrates may have a layer of oxide vapor deposition film. A base laminate film of biaxially-stretched nylon was coated with a vapor deposition layer of SiO_2 , a vapor deposition layer of Al_2O_3 , and gas barrier coating composition featuring Soarnol D 2908, 0.2 part tetraethoxysilane hydrolyzate, and 2 parts titanium acetylacetone hydrolyzate. The oxygen permeability of the laminated product at 23° and 90% relative humidity was 0.4 $cm^3/m^2\text{-atm}\text{-24 h}$ and the water vapor permeability at 38° and 100% relative humidity was 0.5 $g/m^2\text{-atm}\text{-24 h}$.

IT 25038-59-9, Poly(ethylene terephthalate), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base film; gas barrier coating composition of polyvinyl alc. binder, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IT 25067-34-9, RS-110
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (gas barrier coating composition of polyvinyl alc. binder, organosilane, and organometal with good adhesion for base film in O and moisture vapor barrier packaging)

RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H₂C=CH-OH

CM 2

CRN 74-85-1
CMF C2 H4

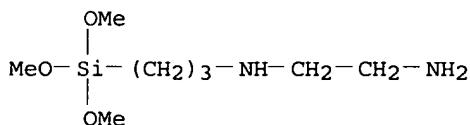
H₂C=CH₂

IT 1760-24-3, N-β-(Aminoethyl)-γ-

aminopropyltrimethoxysilane
RL: TEM (Technical or engineered material use); USES (Uses)
(gas barrier coating composition of polyvinyl alc. binder,
organosilane, and organometal with good adhesion for base film in
O and moisture vapor barrier packaging)

RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX
NAME)



IC ICM C09D183-10

ICS C08G077-442; C08G077-58; C08K005-057; C08K005-09

CC 42-10 (Coatings, Inks, and Related Products)

IT 25038-59-9, Poly(ethylene terephthalate), uses

RL: TEM (Technical or engineered material use); USES (Uses)
(base film; gas barrier coating composition of polyvinyl alc. binder,
organosilane, and organometal with good adhesion for base film in
O and moisture vapor barrier packaging)

IT 24937-78-8D, Ethylene-vinyl acetate copolymer, saponified

25067-34-9, RS-110 181285-34-7, Soarnol D 2908

RL: POF (Polymer in formulation); TEM (Technical or engineered
material use); USES (Uses)

(gas barrier coating composition of polyvinyl alc. binder,
organosilane, and organometal with good adhesion for base film in
O and moisture vapor barrier packaging)

IT 141-97-9D, Ethyl acetylacetate, zirconium chelate compds.,
hydrolyzate 1071-76-7D, Tetrabutoxy zirconium, Et acetylacetate
chelate compds., hydrolyzate 1760-24-3,

N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane

RL: TEM (Technical or engineered material use); USES (Uses)

(gas barrier coating composition of polyvinyl alc. binder,
organosilane, and organometal with good adhesion for base film in
O and moisture vapor barrier packaging)

L130 ANSWER 8 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

2003:767992 Document No. 139:278070 Gas-barrier coating compositions
for laminated packaging materials and their manufacture. Shiho,
Hiroshi; Kawahara, Koji; Nishikawa, Akira (JSR Ltd., Japan). Jpn.
Kokai Tokkyo Koho JP 2003277677 A2 20031002, 23 pp. (Japanese).

CODEN: JKXXAF. APPLICATION: JP 2002-88718 20020327.

AB Title toxic compound-free compns. contain (A) poly(vinyl alc.) resins

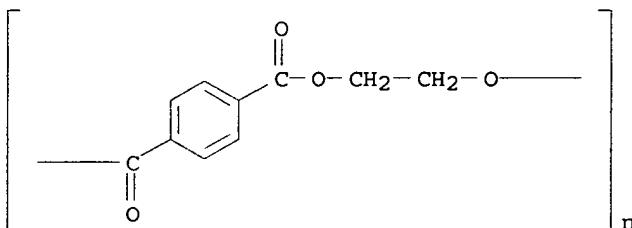
and (B) co-hydrolyzates and/or co-condensates from (B1) $R_1mM(OR_2)_n$ ($M = Al, Ti, Zr; R_1 = C_1-8$ hydrocarbyl; $R_2 = C_1-5$ alkyl, C_1-6 acyl, Ph; $m, n \geq 0$ integer with $m + n =$ valence number of M) metal alkoxides, their hydrolyzates, condensates, chelate (derivs.), and/or acylate (derivs.) and (B2) silane couplers, their hydrolyzates and/or condensates. A composition containing Soarnol D 2908 and 3-glycidoxypropyltrimethoxysilane/Ti isopropoxide acetylacetone hydrolyzate showed a viscosity 20 mPa·s initially and after 24 h and was coated on a PET film and baked at 120° for 1 min to form a coating showing O permeability 1.4 cm³/m²·atm·24 h under 90% relative humidity and good adhesion to PET film even after soaking in 90° water for 30 min.

IT 25038-59-9P, PET polymer, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(base film, laminated packagings from; gas-barrier coatings containing vinyl alc. resins and metal alkoxide/silane coupler condensates and/or hydrolyzates with water-resistant adhesion for packagings)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)

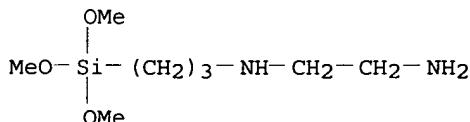


IT 1760-24-3DP, N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane, hydrolyzate/condensates with metal alkoxide chelates

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal alkoxide/silane coupler condensates and/or hydrolyzates with water-resistant adhesion for packagings)

RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IT 25067-34-9, RS 110 (polymer)

RL: TEM (Technical or engineered material use); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal alkoxide/silane coupler condensates and/or hydrolyzates with water-resistant adhesion for packagings)

RN 25067-34-9 HCAPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O $\text{H}_2\text{C}=\text{CH}-\text{OH}$

CM 2

CRN 74-85-1
CMF C2 H4 $\text{H}_2\text{C}=\text{CH}_2$

IC ICM C09D129-04

ICS B32B027-18; B32B027-30; C09D185-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

IT 9003-07-0P, GH 1 (polyolefin) 25038-59-9P, PET polymer,
usesRL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(base film, laminated packagings from; gas-barrier coatings
containing vinyl alc. resins and metal alkoxide/silane coupler
condensates and/or hydrolyzates with water-resistant adhesion for
packagings)IT 1760-24-3DP, N- β -(Aminoethyl)- γ -
aminopropyltrimethoxysilane, hydrolyzate/condensates with metal
alkoxide chelates 2530-83-8DP, 3-Glycidoxypolypropyltrimethoxysilane,
hydrolyzate/condensates with metal alkoxide chelates 7440-32-6DP,
Titanium, alkoxide chelate derivs., hydrolyzate/condensates with
silane couplers 7440-67-7DP, Zirconium, alkoxide chelate derivs.,
hydrolyzate/condensates with silane couplers 26115-70-8DP,
1,3,5-Tris(trimethoxysilylpropyl)isocyanurate,
hydrolyzate/condensates with metal alkoxide chelates
RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal
alkoxide/silane coupler condensates and/or hydrolyzates with
water-resistant adhesion for packagings)

IT 25067-34-9, RS 110 (polymer) 181285-34-7, Soarnol D 2908

313056-70-1, Soarnol D 2935X

RL: TEM (Technical or engineered material use); USES (Uses)

(gas-barrier coatings containing vinyl alc. resins and metal
alkoxide/silane coupler condensates and/or hydrolyzates with
water-resistant adhesion for packagings)

L130 ANSWER 9 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN

2003:767991 Document No. 139:278069 Gas-barrier coating compositions
for laminated packaging materials and their manufacture. Shiho,
Hiroshi; Kawahara, Koji; Nishikawa, Akira (JSR Ltd., Japan). Jpn.
Kokai Tokkyo Koho JP 2003277676 A2 20031002, 24 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 2002-88717 20020327.AB Title toxic compound-free compns. contain (A) poly(vinyl alc.) resins
and (B) co-hydrolyzates and/or co-condensates from (B1) R1mM(OR2)n
(M = Al, Ti, Zr; R1 = C1-8 hydrocarbyl; R2 = C1-5 alkyl, C1-6 acyl,

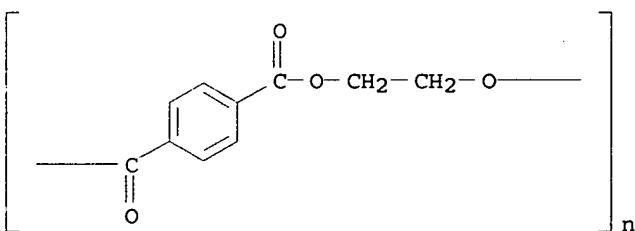
Ph; m, n ≥ 0 integer with m + n = valence number of M) metal alkoxides, their hydrolyzates, condensates, chelate (derivs.), and/or acylate (derivs.), and (B2) R₃Si(OR₄)₄₋₁ (R₃ = Cl-8 hydrocarbyl; R₄ = Cl-5 alkyl, Cl-6 acyl, Ph; 1 = 0-2) organosilanes, their hydrolyzates and/or condensates. A composition containing Soarnol D 2908 and Ti isopropoxide acetylacetone/Si(OEt)₄ hydrolyzate showed a viscosity 20 mPa·s initially and after 24 h and was coated on a PET film and baked at 120° for 1 min to form a coating showing O permeability 1.3 cm³/m²·atm·24 h under 90% relative humidity and good adhesion to PET film even after soaking in 90° water for 30 min.

IT 25038-59-9, PET polymer, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(base film, laminated packagings from; gas-barrier coatings containing vinyl alc. resins and metal alkoxide/organosilane hydrolyzates or condensates with water-resistant adhesion for packagings)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)

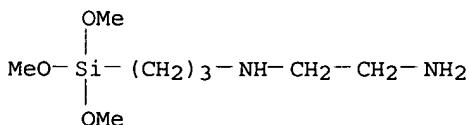


IT 1760-24-3DP, N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane, hydrolyzates and/or condensates with metal alkoxide chelates and tetraethoxysilane

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal alkoxide/organosilane hydrolyzates or condensates with water-resistant adhesion for packagings)

RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IT 25067-34-9, RS 110 (polymer)

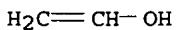
RL: TEM (Technical or engineered material use); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal alkoxide/organosilane hydrolyzates or condensates with water-resistant adhesion for packagings)

RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



CM 2

CRN 74-85-1
CMF C2 H4



IC ICM C09D129-04
ICS B32B027-18; B32B027-30; C09D183-02; C09D183-04; C09D185-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38
IT 9003-07-0, GH 1 (polyolefin) 25038-59-9, PET polymer, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(base film, laminated packagings from; gas-barrier coatings
containing vinyl alc. resins and metal alkoxide/organosilane
hydrolyzates or condensates with water-resistant adhesion for
packagings)
IT 78-10-4DP, Tetraethoxysilane, hydrolyzates and/or condensates with
metal alkoxide chelates 1185-55-3DP, Methyltrimethoxysilane,
hydrolyzates and/or condensates with metal alkoxide chelates
1760-24-3DP, N- β -(Aminoethyl)- γ -
aminopropyltrimethoxysilane, hydrolyzates and/or condensates with
metal alkoxide chelates and tetraethoxysilane 7440-32-6DP,
Titanium, alkoxide chelates, hydrolyzates and/or condensates with
alkoxysilanes 7440-67-7DP, Zirconium, alkoxide chelates,
hydrolyzates and/or condensates with alkoxysilanes
RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal
alkoxide/organosilane hydrolyzates or condensates with
water-resistant adhesion for packagings)
IT 25067-34-9, RS 110 (polymer) 181285-34-7, Soarnol D 2908
313056-70-1, Soarnol D 2935X
RL: TEM (Technical or engineered material use); USES (Uses)
(gas-barrier coatings containing vinyl alc. resins and metal
alkoxide/organosilane hydrolyzates or condensates with
water-resistant adhesion for packagings)

L130 ANSWER 10 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
2003:767990 Document No. 139:278068 Gas-barrier coating compositions
for laminated packaging materials and their manufacture. Shiho,
Hiroshi; Kawahara, Koji; Nishikawa, Akira (JSR Ltd., Japan). Jpn.
Kokai Tokkyo Koho JP 2003277675 A2 20031002, 24 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 2002-88716 20020327.

AB Title toxic compound-free compns. contain alkoxysilyl-modified
poly(vinyl alc.) resins and R₁mM(OR₂)_n (M = metal; R₁ = C₁-8
hydrocarbyl; R₂ = C₁-5 alkyl, C₁-6 acyl, Ph; m, n ≥ 0 integer
with m + n = valence number of M) metal alkoxides, their hydrolyzates,
condensates, chelate (derivs.), and/or acylate (derivs.). A composition
containing Si(OEt)₄-modified Soarnol D 2908 and Ti isopropoxide
acetylacetone hydrolyzate showed a viscosity 25 mPa·s initially

and 30 mPa-s after 24 h and was coated on a PET film and baked at 120° for 1 min to form a coating showing O permeability 1.1 cm³/m²-atm-24 h under 90% relative humidity and good adhesion to PET film even after soaking in 90° water for 30 min.

IT 25067-34-9DP, RS 110 (polymer), reaction products with siloxanes 605594-97-6P, N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane-tetraethoxysilane-Soarnol D 2908 copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (alkoxysilyl-modified vinyl alc. resin- and metal alkoxide hydrolyzate-containing gas-barrier coatings with water-resistant adhesion for packagings)

RN 25067-34-9 HCAPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H₂C=CH-OH

CM 2

CRN 74-85-1

CMF C2 H4

H₂C=CH₂

RN 605594-97-6 HCAPLUS

CN Silicic acid (H₄SiO₄), tetraethyl ester, polymer with Soarnol D 2908 and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 181285-34-7

CMF Unspecified

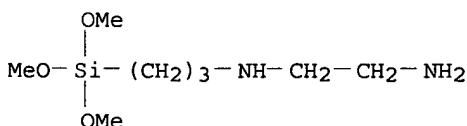
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

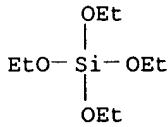
CM 2

CRN 1760-24-3

CMF C8 H22 N2 O3 Si



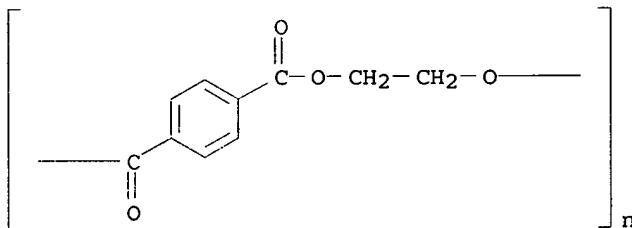
CM 3

CRN 78-10-4
CMF C8 H20 O4 Si

IT 25038-59-9P, PET polymer, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (base film, laminated packagings from; alkoxysilyl-modified vinyl alc. resin- and metal alkoxide hydrolyzate-containing gas-barrier coatings with water-resistant adhesion for packagings)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IC ICM C09D129-04
 ICS B32B027-30; C09D183-04; C09D185-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 38
 IT 7440-32-6DP, Titanium, isopropoxide acetylacetone deriva., hydrolyzates 7440-67-7DP, Zirconium, isopropoxide acetylacetone deriva., hydrolyzates 25067-34-9DP, RS 110 (polymer), reaction products with siloxanes 313056-70-1DP, Soarnol D 2935X, reaction products with siloxanes 605594-89-6P, Tetraethoxysilane-Soarnol D 2908 copolymer 605594-93-2P, Methyltrimethoxysilane-Soarnol D 2908 copolymer 605594-97-6P, N-β-(Aminoethyl)-γ-aminopropyltrimethoxysilane-tetraethoxysilane-Soarnol D 2908 copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (alkoxysilyl-modified vinyl alc. resin- and metal alkoxide hydrolyzate-containing gas-barrier coatings with water-resistant adhesion for packagings)

IT 9003-07-0P, GH 1 (polyolefin) 25038-59-9P, PET polymer, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (base film, laminated packagings from; alkoxysilyl-modified vinyl alc. resin- and metal alkoxide hydrolyzate-containing gas-barrier coatings with water-resistant adhesion for packagings)

2003:750939 Document No. 139:278052 Poly(vinyl alcohol)-based gas-barrier coating compositions for packaging materials. Shiho, Hiroshi; Kawahara, Koji; Nishikawa, Akira (JSR Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003268309 A2 20030925, 23 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 2002-78868 20020320.

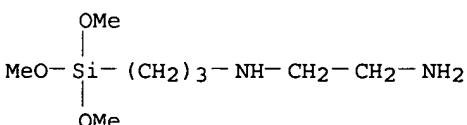
AB The title compns. have no harmful compound to human body, e.g., melamine, formaldehyde and organic tin derivs., etc., show no decreasing gas-barrier properties even under high humid condition, and contain: (A) a poly(vinyl alc.) resin, (B) a metal chelate compound with a formula: R₁M(OR₂)_n, wherein M=metal, R₁=C₁₋₈ organic hydrocarbyl, R₂=C₁₋₅ alkyl or C₁₋₆ acyl or Ph, m, n≥0 and (m+n)=valence of M, and (C) a compound containing isocyanate, isocyanurate and OH- or/and hydrolyzable group-bearing silicon atom. Thus, mixing 100 parts 4% aqueous solution of Soarnol D 2908 (ethylene-vinyl alc. polymer), 2 parts acetylacetone solution of titanium tetrakisopropoxide (preparation given), 20 parts n-propanol and 6 parts water at room temperature for 30 min, adding 0.4 g 1,3,5-tris(trimethoxysilylpropyl) isocyanurate, 6 parts n-propanol and 4 parts water gave a title composition

IT 1760-24-3, N-β-(Aminoethyl)-3-aminopropyltrimethoxysilane 15396-00-6,
γ-Isocyanatopropyltrimethoxysilane

RL: MOA (Modifier or additive use); USES (Uses)
(in poly(vinyl alc.)-based gas-barrier coating compns. for packaging materials)

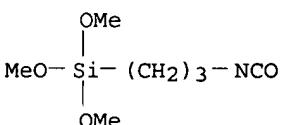
RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 15396-00-6 HCPLUS

CN Silane, (3-isocyanatopropyl)trimethoxy- (9CI) (CA INDEX NAME)



IT 25067-34-9, RS 110

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(in poly(vinyl alc.)-based gas-barrier coating compns. for packaging materials)

RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C₂ H₄ O

H₂C≡CH—OH

CM 2

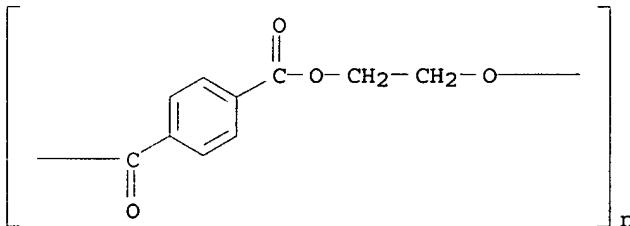
CRN 74-85-1
CMF C2 H4

H₂C≡CH₂

IT 25038-59-9, Polyethylene terephthalate, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate film; coating with poly(vinyl alc.)-based gas-barrier coating compns. as packaging materials)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IC ICM C09D185-00
ICS C08G079-00; C09D129-04; C09D175-04; C09D183-04; B32B027-30

CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 17, 62, 63

IT 546-68-9, Titanium tetraisopropoxide 1071-76-7, Zirconium tetrabutoxide 1760-24-3, N-β-(Aminoethyl)-3-aminopropyltrimethoxysilane 15396-00-6, γ-Isocyanatopropyltrimethoxysilane 26115-70-8, 1,3,5-Tris(trimethoxysilylpropyl) isocyanurate
RL: MOA (Modifier or additive use); USES (Uses)
(in poly(vinyl alc.)-based gas-barrier coating compns. for packaging materials)

IT 25067-34-9, RS 110 181285-34-7, Soarnol D 2908
313056-70-1, Soarnol D 2935X

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(in poly(vinyl alc.)-based gas-barrier coating compns. for packaging materials)

IT 9003-07-0, GH-I (polyolefin) 25038-59-9, Polyethylene terephthalate, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate film; coating with poly(vinyl alc.)-based gas-barrier coating compns. as packaging materials)

2003:711691 Document No. 139:246969 Coating compositions with good storageability, adhesion, and water resistance, and coating components. Shimada, Nobuko (JSR Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003253209 A2 20030910, 16 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 2002-57373 20020304.

AB Title compns. comprise (A) ≥ 1 compds. selected from metal alkoxylates $R1mM(OR2)n$, hydrolyzates, condensates, or chelate compound of metal alkoxylates, hydrolyztes or condensates of metal chelates, metal acylates, hydrolyzates or condensates of metal acylates and (B) compds. having hydrolyzable group and/or hydroxy bonded silicon, and isocyanurate and/or isocyanate groups, wherein $R1 = C1-8$ organic group; $R2 = C1-5$ alkyl, $C1-6$ acyl, or phenyl; $M =$ metal; $m, n = \geq 0$ integer; and $m + n =$ valence of metal. Thus, methyltrimethoxysilane 65, dimethyldimethoxysilane 35, and vinyl copolymer obtained from Me methacrylate, 2-ethylhexyl methacrylate, 2-hydroxyethyl methacrylate, γ -methacryloylpropyltrimethoxysilane, 4-acryloyloxy-2,2,6,6-tetramethylpiperidine, diacetoneacrylamide, and trimethylamine methacrylimide 20 parts were heated at 60° for 5.5 h to give 40%-solids copolymer solution with M_w 20,000, 100 parts of which was mixed with 2 parts 1,3,5-N-tris(trimethoxysilylpropyl)isocyanurate and 1 part N- β -(aminoethyl)- γ -aminopropylmethyldimethoxysilane, applied on a glass plate, and dried at 80° for 5 min to give a coating with good initial adhesion, initial hardness HB, and water, chemical, weather, and hot water resistance.

IT 26062-94-2, Polybutylene terephthalate
RL: TEM (Technical or engineered material use); USES (Uses)
(assumed monomers, substrate; coating compns. with good storageability, adhesion, and water resistance, and coating components)

RN 26062-94-2 HCPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)

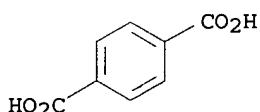
CM 1

CRN 110-63-4
CMF C4 H10 O2

HO- $(CH_2)_4$ -OH

CM 2

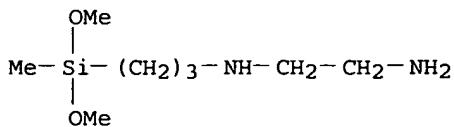
CRN 100-21-0
CMF C8 H6 O4



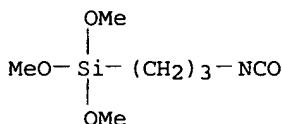
IT 3069-29-2, N- β -(Aminoethyl)- γ -aminopropylmethyldimethoxysilane 15396-00-6, γ -Isocyanatopropyltrimethoxysilane
RL: MOA (Modifier or additive use); USES (Uses)
(coating compns. with good storageability, adhesion, and water

resistance, and coating components)

RN 3069-29-2 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA INDEX NAME)



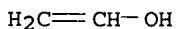
RN 15396-00-6 HCPLUS
 CN Silane, (3-isocyanatopropyl)trimethoxy- (9CI) (CA INDEX NAME)



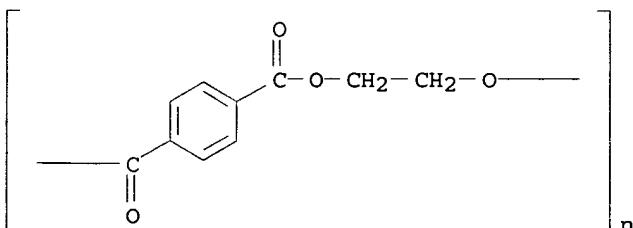
IT 9002-89-5, Polyvinyl alcohol
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (coating compns. with good storageability, adhesion, and water resistance, and coating components)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IT 25038-59-9, Polyethylene terephthalate, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; coating compns. with good storageability, adhesion, and water resistance, and coating components)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IC ICM C09D185-00

ICS C09D129-04; C09D163-00; C09D175-04; C09D183-02; C09D183-04;
C09D183-08; C08G018-77

CC 42-10 (Coatings, Inks, and Related Products)

IT 26062-94-2, Polybutylene terephthalate
RL: TEM (Technical or engineered material use); USES (Uses)
(assumed monomers, substrate; coating compns. with good
storageability, adhesion, and water resistance, and coating
components)

IT 2530-83-8, γ -Glycidoxypolytrimethoxysilane 3069-29-2
, N- β -(Aminoethyl)- γ -aminopropylmethyldimethoxysilane
15396-00-6, γ -Isocyanatopropyltrimethoxysilane
26115-70-8
RL: MOA (Modifier or additive use); USES (Uses)
(coating compns. with good storageability, adhesion, and water
resistance, and coating components)

IT 9002-89-5, Polyvinyl alcohol
RL: POF (Polymer in formulation); TEM (Technical or engineered
material use); USES (Uses)
(coating compns. with good storageability, adhesion, and water
resistance, and coating components)

IT 7429-90-5, Aluminium, uses 24968-12-5, Polybutylene terephthalate
25038-59-9, Polyethylene terephthalate, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(substrate; coating compns. with good storageability, adhesion,
and water resistance, and coating components)

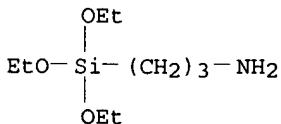
L130 ANSWER 13 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
2003:529385 Document No. 139:86719 Organic pigment nanoparticles,
their production and dispersions and jet-printing inks containing
them. Kamigaki, Mamoru; Morii, Hiroko; Hayashi, Kazuyuki; Iwaki,
Toru (Toda Kogyo Corporation, Japan). Eur. Pat. Appl. EP 1325944 A2
20030709, 33 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR,
GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY,
AL, TR, BG, CZ, EE, SK. (English). CODEN: EPXXDW. APPLICATION: EP
2002-258637 20021216.

AB There is provided a functional material comprising coloring
particles having an average primary particle diameter of 1-50 nm in a dried
state, and having a BET sp. surface area value of 30-500 m²/g and a
light transmittance of \geq 80%. The functional material
composed of fine coloring particles, exhibits not only an excellent
transparency but also a high tinting strength and a clear hue. In
an example, a polysiloxane (TSF 484) was coated on fine silica
particles followed by a blue pigment. The resulting color-coated
particles were treated with HF to dissolve the silica, resulting in
blue 6-nm pigment particles.

IT 919-30-2, γ -Aminopropyltriethoxysilane
9002-89-5, Polyvinyl alcohol
RL: TEM (Technical or engineered material use); USES (Uses)
(coupling agent; in production of organic pigment nanoparticles)

RN 919-30-2 HCPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

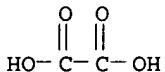


RN 9002-89-5 HCPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 OH₂C=CH-OH

IT 144-62-7, Oxalic acid, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (in production of organic pigment nanoparticles)
 RN 144-62-7 HCPLUS
 CN Ethanedioic acid (9CI) (CA INDEX NAME)

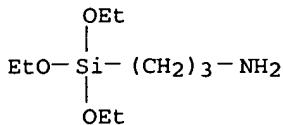


IC ICM C09B067-00
 ICS C09C003-00; C09C001-30; C09C001-04; C09C001-02; C09C001-36
 CC 42-6 (Coatings, Inks, and Related Products)
 IT 919-30-2, γ -Aminopropyltriethoxysilane 2031-67-6,
 Methyltriethoxysilane 9002-89-5, Polyvinyl alcohol
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coupling agent; in production of organic pigment nanoparticles)
 IT 144-62-7, Oxalic acid, reactions 7647-01-0, Hydrochloric
 acid, reactions 7664-39-3, Hydrofluoric acid, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (in production of organic pigment nanoparticles)

L130 ANSWER 14 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2003:470669 Document No. 139:37676 Gas-barrier coating compositions
 with improved adhesion and films prepared therefrom. Morinaka,
 Yuriko; Haggio, Yumiko; Fukushima, Yoichi (Kyodo Printing Co., Ltd.,
 Japan). Jpn. Kokai Tokkyo Koho JP 2003171600 A2 20030620, 9 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-278478 20020925.
 PRIORITY: JP 2001-295841 20010927.

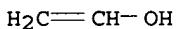
AB The compns., useful for food packaging materials, etc., comprise (A)
 acetoacetyl group-modified vinyl alc. polymers, (B) 0.1-10 parts
 (based on 100 parts A) amino- or imino-containing alkoxy silanes
 HNXR1SiR2n(OR3)3-n (R1 = C1-4 alkylene; R2, R3 = C1-4 alkyl; X = H,
 aminoalkyl; n = 0, 1), and (C) water optionally containing lower alc.
 Thus, a composition containing Z 200 (acetoacetyl group-modified vinyl alc.
 polymer) 2, Poval 103 [poly(vinyl alc.)] 4, KBE 903
 (γ -aminopropyltriethoxysilane) 0.06, and 80:20 water-iso-Pr
 alc. mixture 94 parts was applied on E 5100 (PET film) and dried to
 give a coated film with O permeability <1 mL/m²-atom-day and good
 moisture resistance.

IT 919-30-2, KBE 903
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (gas-barrier coating compns. with improved adhesion for packaging
 films)
 RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



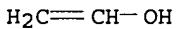
IT 9002-89-5, Poval 103 9002-89-5D, Poly(vinyl alcohol), acetoacetyl group-modified 39290-68-1
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (gas-barrier coating compns. with improved adhesion for packaging films)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

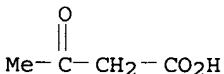
RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

RN 39290-68-1 HCPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

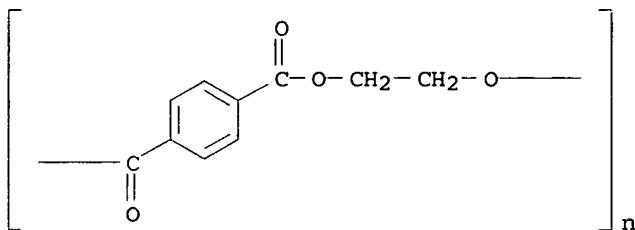
CM 3

CRN 557-75-5

CMF C2 H4 O

 $\text{H}_2\text{C}=\text{CH}-\text{OH}$

IT 25038-59-9, Toyobo Ester Film E 5100, miscellaneous
 RL: MSC (Miscellaneous)
 (substrate; gas-barrier coating compns. with improved adhesion
 for packaging films)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C09D129-04
 ICS C08J007-04; C08L067-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 17, 42
 IT 919-30-2, KBE 903
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (gas-barrier coating compns. with improved adhesion for packaging
 films)
 IT 9002-89-5, Poval 103 9002-89-5D, Poly(vinyl
 alcohol), acetoacetyl group-modified 39290-68-1
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (gas-barrier coating compns. with improved adhesion for packaging
 films)
 IT 25038-59-9, Toyobo Ester Film E 5100, miscellaneous
 RL: MSC (Miscellaneous)
 (substrate; gas-barrier coating compns. with improved adhesion
 for packaging films)

L130 ANSWER 15 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2002:955515 Document No. 138:40784 Gas-barrier coating compositions
 with storage stability and coatability and gas-barrier films
 therefrom. Tsuyuki, Yuriko; Fukushima, Yoichi; Fukaya, Satoshi;
 Hagio, Yumiko (Kyodo Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo
 Koho JP 2002363479 A2 20021218, 10 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 2001-176174 20010611.

AB Title compns. comprise (A) aqueous poly(vinyl alc.) (I) solns. having
 viscosity of 5-50 mPa·s and containing anionic modified I, (B) amino
 and/or imino alkoxy silanes HNXYSiR_{2n}(OR₁)_{3-n} (R₁-R₂ = C₁₋₄ alkyl; X
 = H or aminoalkyl; Y = C₁₋₄ alkylene; n = 0-1), and (D) water or low
 carbon alc.-added water at A/B of 100:3-200. A composition comprising
 PVA-SK 5102 4, 3-aminopropyltriethoxysilane 2, and 20:80
 iso-PrOH/water blend 96 parts showed no gel after 1 mo at low temperature
 and was coated on a PET film and dried at 55° for 1 min to
 form a film having O permeability <1 cm³/m²-atm-day and good

adhesion to polyurethane adhesive-coated polypropylene films at 40° and 90% relative humidity over 1 mo.

IT 9002-89-5, Poval

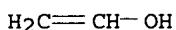
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)

RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

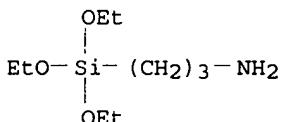


IT 919-30-2, 3-Aminopropyltriethoxysilane

RL: TEM (Technical or engineered material use); USES (Uses)
(amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)

RN 919-30-2 HCPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

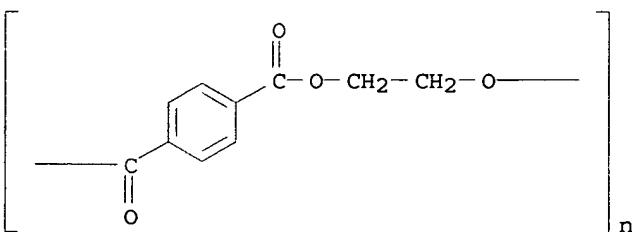


IT 25038-59-9, PET polymer, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(base films; amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IC ICM C09D129-04

ICS B32B027-30; C08J005-18; C08J007-04; C09D183-08; B65D081-24;
C08L067-00

CC 42-10 (Coatings, Inks, and Related Products)

IT 9002-89-5, Poval 111214-41-6, Poval KM 118 186322-73-6,

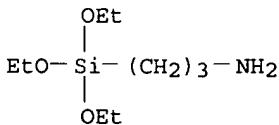
PVA-SK 5102
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)
 IT 919-30-2, 3-Aminopropyltriethoxysilane 52234-82-9,
 Chemitite PZ 33
 RL: TEM (Technical or engineered material use); USES (Uses)
 (amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)
 IT 25038-59-9, PET polymer, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base films; amino (or imino)alkoxysilane- and anionic poly(vinyl alc.)-containing aqueous gas-barrier coatings with storage stability and coatability)

L130 ANSWER 16 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2002:687963 Document No. 137:218072 Laminated plastic films and their use as food packaging materials. Tsuyuki, Yuriko; Fukushima, Yoichi; Fukaya, Satoshi; Hagio, Yumiko (Kyodo Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002254578 A2 20020911, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-57544 20010302.

AB The laminates for packaging materials comprise substrates successively laminated with vinyl alc. polymer-containing gas-barrier layers and printing layers. Thus, a composition containing 100 g 5% Poval 105 solution and 2.5 g γ -aminopropyltriethoxysilane was applied on a PET film at 65 m/min and dried to give a gas barrier-layer, which was then gravure-printed with food packaging inks and laminated with a polyurethane adhesive to give a laminated packaging film with total residual solvent 0.4 mg/m² and O permeability 1.2 mL/m²-atmospheric

IT 919-30-2DP, γ -Aminopropyltriethoxysilane, reaction products with PVA and ethylene glycol diglycidyl ether
 9002-89-5DP, Poval 105, reaction products with γ -aminopropyltriethoxysilane and optionally ethylene glycol diglycidyl ether 13822-56-5DP, γ -Aminopropyltrimethoxysilane, reaction products with PVA and ethylene glycol diglycidyl ether
 RL: FFD (Food or feed use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (gas-barrier layer; gas-barrier laminated plastic films for food packaging materials)

RN 919-30-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

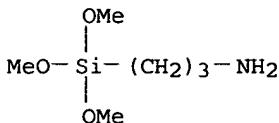
CM 1

CRN 557-75-5

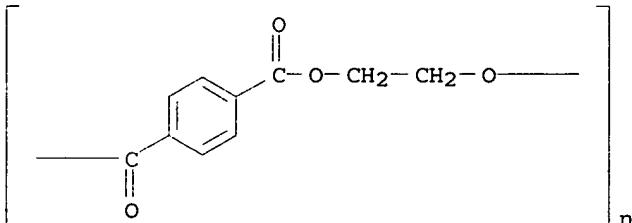
CMF C2 H4 O



RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IT 25038-59-9, Poly(ethylene terephthalate), uses
 RL: FFD (Food or feed use); PEP (Physical, engineering or chemical
 process); PYP (Physical process); TEM (Technical or engineered
 material use); BIOL (Biological study); PROC (Process); USES (Uses)
 (substrate; gas-barrier laminated plastic films for food
 packaging materials)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



IC ICM B32B027-30
 ICS B65D065-40
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 17, 42
 IT 919-30-2DP, γ -Aminopropyltriethoxysilane, reaction
 products with PVA and ethylene glycol diglycidyl ether
 2224-15-9DP, Ethylene glycol diglycidyl ether, reaction products
 with PVA and aminopropyltriethoxysilane 9002-89-5DP, Poval
 105, reaction products with γ -aminopropyltriethoxysilane and
 optionally ethylene glycol diglycidyl ether 13822-56-5DP,
 γ -Aminopropyltrimethoxysilane, reaction products with PVA and
 ethylene glycol diglycidyl ether 52234-82-9DP, Chemitite PZ 33,
 reaction products with PVA and aminopropyltriethoxysilane
 56900-02-8DP, reaction products with PVA and
 aminopropyltriethoxysilane 111214-41-6DP, Poval KM 118, reaction
 products with γ -aminopropyltriethoxysilane and optionally
 ethylene glycol diglycidyl ether
 RL: FFD (Food or feed use); IMF (Industrial manufacture); TEM
 (Technical or engineered material use); BIOL (Biological study);
 PREP (Preparation); USES (Uses)
 (gas-barrier layer; gas-barrier laminated plastic films for food
 packaging materials)
 IT 9003-07-0, Polypropylene 25038-59-9, Poly(ethylene

terephthalate), uses

RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); BIOL (Biological study); PROC (Process); USES (Uses) (substrate; gas-barrier laminated plastic films for food packaging materials)

L130 ANSWER 17 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN

2002:610547 Document No. 137:141449 Polysiloxane barrier coatings suitable for production of multilayer packaging materials. Merlin, Patrick (Dow Corning SA, Belg.). Brit. UK Pat. Appl. GB 2367556 A1 20020410, 27 pp. (English). CODEN: BAXXDU. APPLICATION: GB 2000-24367 20001005.

AB Polysiloxane barrier coating, suitable for production of multilayer packaging materials, comprises reaction product in non-aqueous solvent of (a) an amino-functional cyclic siloxane of general formula $(R_1)_2SiO_2/2x$, where each R_1 may be the same or different and may be selected from the group consisting of alkyl, substituted alkyl, amine, aryl, substituted aryl, arylalkyl, each having 1 to 18 carbon atoms, and (b) a reactive silane or a mixture of reactive silanes of the formula $(R_2O)_n(R_3)_3-nSiX$, where each R_2 group is the same or different and represents C1-c4-alkyl group and C1-c4-acyl group, each R_3 group is the same or different and represents a C1-C8-hydrocarbon group, X is an organic radical with at least one functional unit selected from epoxide, alkenyl, aldehyde, (meth)acrylate, episulfide, (meth)acrylamide, isocyanate, isothiocyanate, or halogen, and n is 1, 2 or 3. Thus, amino-functional cyclic siloxane composed of units of [3-[(2-aminoethyl)amino]-3-methylpropyl]methylsilanediol was reacted in isopropanol with glycidyloxypropyltrimethoxysilane at room temperature for 24 h. This polymer was laminated between two LDPE layers at 60° and showed Et acetate transmission rate 8-65 g/sq.m in 24 h, compared to 700 for LDPE.

IT 444587-35-3DP, reaction products with functionalized silanes
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (cyclic; polysiloxane barrier coatings suitable for production of multilayer packaging materials)

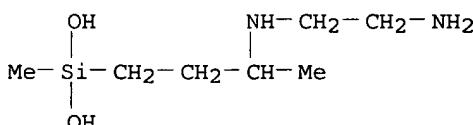
RN 444587-35-3 HCAPLUS

CN Silanediol, [3-[(2-aminoethyl)amino]butyl]methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 444587-34-2

CMF C7 H20 N2 O2 Si

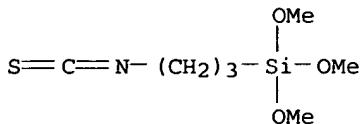


IT 122055-02-1DP, reaction products with cyclic amino-containing polysiloxanes

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polysiloxane barrier coatings suitable for production of multilayer packaging materials)

RN 122055-02-1 HCAPLUS

CN Silane, (3-isothiocyanatopropyl)trimethoxy- (9CI) (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol) 25038-59-9,
Poly(ethylene terephthalate), uses 25067-34-9,
Ethylene-vinyl alcohol copolymer 25230-87-9
25718-70-1

RL: TEM (Technical or engineered material use); USES (Uses)
(substrate; polysiloxane barrier coatings suitable for production of
multilayer packaging materials)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

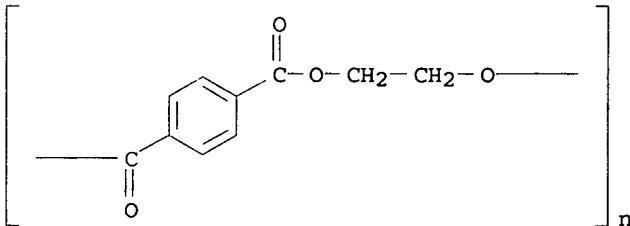
CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



RN 25067-34-9 HCAPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

CM 2

CRN 74-85-1

CMF C2 H4

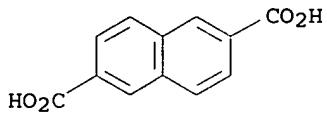
H₂C=CH₂

RN 25230-87-9 HCPLUS

CN 2,6-Naphthalenedicarboxylic acid, polymer with 1,2-ethanediol (9CI)
(CA INDEX NAME)

CM 1

CRN 1141-38-4
CMF C₁₂ H₈ O₄



CM 2

CRN 107-21-1
CMF C₂ H₆ O₂

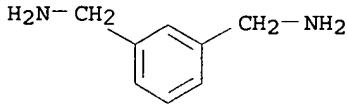
HO-CH₂-CH₂-OH

RN 25718-70-1 HCPLUS

CN Hexanedioic acid, polymer with 1,3-benzenedimethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 1477-55-0
CMF C₈ H₁₂ N₂



CM 2

CRN 124-04-9
CMF C₆ H₁₀ O₄

HO₂C-(CH₂)₄-CO₂H

IC ICM C09D183-04

ICS C08G077-26; C09D183-08

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42

IT 444587-35-3DP, reaction products with functionalized silanes
 444587-36-4DP, reaction products with functionalized silanes
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cyclic; polysiloxane barrier coatings suitable for production of multilayer packaging materials)

IT 2530-83-8DP, Glycidyloxypropyltrimethoxysilane, reaction products with cyclic amino-containing polysiloxanes 3388-04-3DP, A 186, reaction products with cyclic amino-containing polysiloxanes
 25512-39-4DP, Chloropropyltrimethoxysilane, reaction products with cyclic amino-containing polysiloxanes 122055-02-1DP, reaction products with cyclic amino-containing polysiloxanes
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polysiloxane barrier coatings suitable for production of multilayer packaging materials)

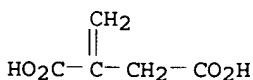
IT 9002-85-1, Poly(vinylidene chloride) 9002-86-2, Polyvinyl chloride
 9002-89-5, Poly(vinyl alcohol) 9003-07-0, Polypropylene
 9003-53-6, Polystyrene 9010-77-9, Ethylene-acrylic acid copolymer
 24937-78-8, Ethylene-vinyl acetate copolymer 24968-11-4, Poly(ethylene naphthalate) 25014-41-9, Poly(acrylonitrile)
 25038-59-9, Poly(ethylene terephthalate), uses
 25067-34-9, Ethylene-vinyl alcohol copolymer
 25230-87-9 25718-70-1 25805-74-7, MXD 6
 31531-56-3, Poly(1,2-dichloroethylene)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; polysiloxane barrier coatings suitable for production of multilayer packaging materials)

L130 ANSWER 18 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2002:384407 Document No. 136:403254 Gas-barrier coating compositions and gas-barrier films. Tsuyuki, Yuriko; Fukushima, Yoichi; Fukaya, Satoshi; Hagio, Yumiko (Kyodo Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002146265 A2 20020522, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-350416 20001117.

AB Coating compns. contain poly(vinyl alc.) (I), amino- and/or iminoalkoxysilanes (II), aziridines (III), and water or lower alcs. at I-II ratio 100:200 - 100:3 and I-III 100:8 - 100:1. Thus, a coating on a PET polyester film contained Poval 105 5, APTES 2.5, Chemitite PZ 33 0.15, and IPA-water 95 (ratio).

IT 97-65-4DP, Itaconic acid, -modified poly(vinyl alc.), reaction products with aminopropyltriethoxysilane and aziridines, uses 9002-89-5DP, Poly(vinyl alcohol), itaconic acid-modified, reaction products with aminopropyltriethoxysilane and aziridines
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating compns. and gas-barrier films)

RN 97-65-4 HCPLUS
 CN Butanedioic acid, methylene- (9CI) (CA INDEX NAME)



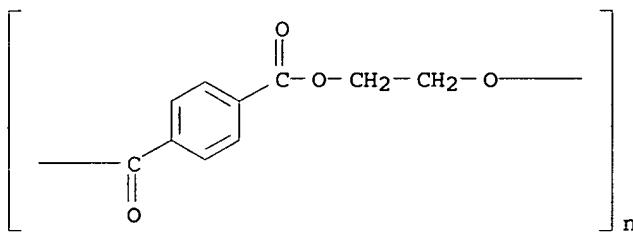
RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 0

$$\text{H}_2\text{C}=\text{CH}-\text{OH}$$

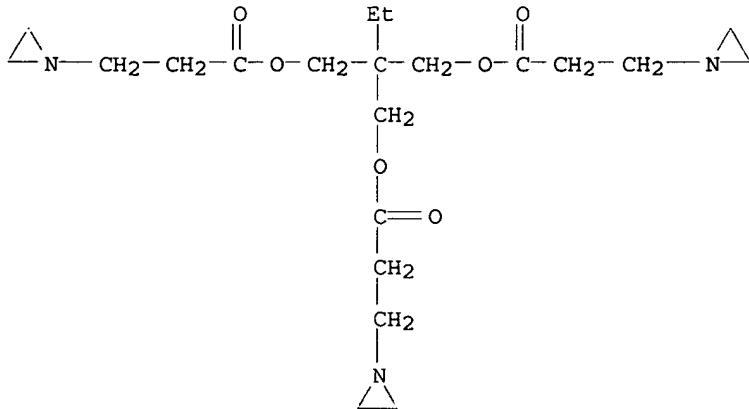
IT 25038-59-9, PET polyester, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(gas-barrier coating compns. and gas-barrier films)
RN 25038-59-9 HCPLUS
CN Poly(oxy-1,2-ethanediylloxy carbonyl-1,4-phenylene carbonyl) (9CI) (CA
INDEX NAME)



IT 428864-02-2P 428864-04-4P 428864-06-6P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating compns. containing poly(vinyl alc.) and aminoalkoxysilanes and aziridines and gas-barrier films)
 RN 428864-02-2 HCAPLUS
 CN 1-Aziridinepropanoic acid, 2-[[3-(1-aziridinyl)-1-oxopropoxy]methyl] 2-ethyl-1,3-propanediyl ester, polymer with ethenol and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

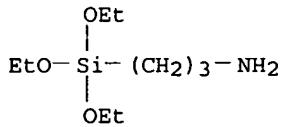
CM 1

CRN 52234-82-9
CMF C21 H35 N3 06



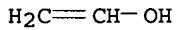
CM 2

CRN 919-30-2
 CMF C9 H23 N O3 Si



CM 3

CRN 557-75-5
 CMF C2 H4 O



RN 428864-04-4 HCPLUS
 CN 1-Aziridinepropanoic acid, 2-[[3-(1-aziridinyl)-1-oxopropoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with R 2105 and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

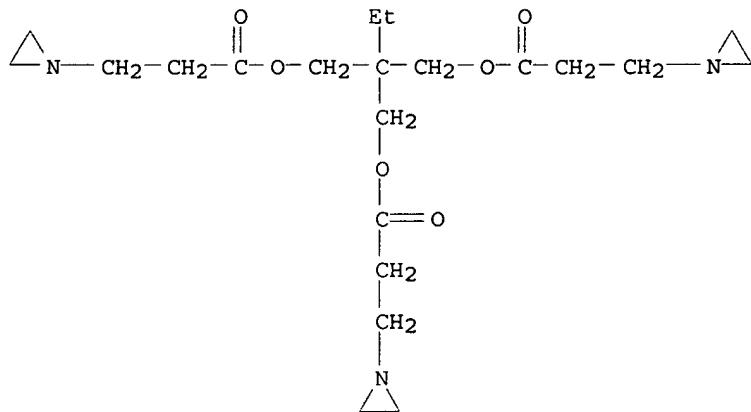
CM 1

CRN 248251-91-4
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

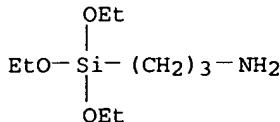
CM 2

CRN 52234-82-9
 CMF C21 H35 N3 O6



CM 3

CRN 919-30-2
 CMF C9 H23 N O3 Si



RN 428864-06-6 HCPLUS
 CN 1-Aziridinepropanoic acid, 2-[[3-(1-aziridinyl)-1-oxopropoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with Poval KM 118 and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

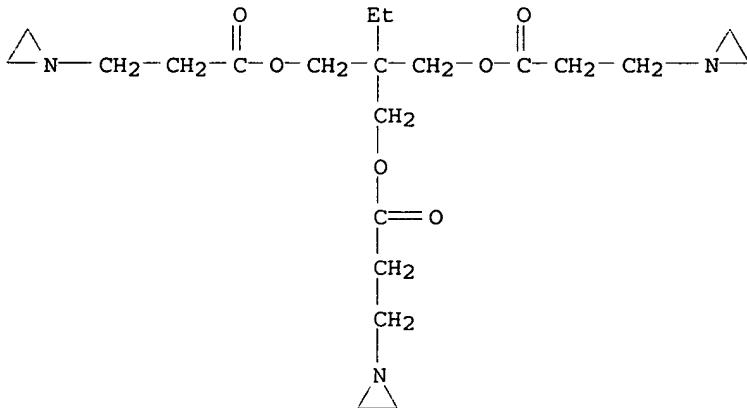
CM 1

CRN 111214-41-6
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

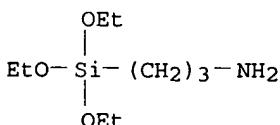
CM 2

CRN 52234-82-9
 CMF C21 H35 N3 O6



CM 3

CRN 919-30-2
 CMF C9 H23 N O3 Si



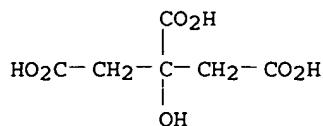
IC ICM C09D129-04
 ICS B32B027-30; B32B027-36; C09D183-08
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 97-65-4DP, Itaconic acid, -modified poly(vinyl alc.),
 reaction products with aminopropyltriethoxysilane and aziridines,
 uses 9002-89-5DP, Poly(vinyl alcohol), itaconic
 acid-modified, reaction products with aminopropyltriethoxysilane and
 aziridines
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating compns. and gas-barrier films)
 IT 25038-59-9, PET polyester, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (gas-barrier coating compns. and gas-barrier films)
 IT 428864-02-2P 428864-04-4P 428864-06-6P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating compns. containing poly(vinyl alc.) and
 aminoalkoxysilanes and aziridines and gas-barrier films)

L130 ANSWER 19 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

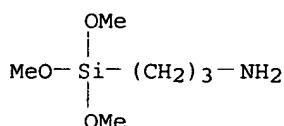
2002:293775 Document No. 136:326996 Method for pretreating and
 subsequently coating metallic surfaces with a paint-type coating
 prior to forming and use of substrates coated in this way.
 Shimakura, Toshiaki; Bittner, Klaus; Domes, Heribert; Wietzoreck,
 Hardy, Jung, Christian (Chemteall GmbH, Germany). PCT Int. Appl. WO
 2002031065 A2 20020418, 115 pp. DESIGNATED STATES: W: AE, AG, AL,
 AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ,
 DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
 IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
 MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI,
 SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM,
 CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL,
 PT, SE, SN, TD, TG, TR. (German). CODEN: PIXXD2. APPLICATION: WO
 2001-EP11738 20011010. PRIORITY: DE 2000-10050532 20001011; DE
 2001-10110830 20010306; DE 2001-10119606 20010421.

AB The invention relates to a method for coating a metallic strip. The
 strip or optionally, the strip sections produced from said strip in
 the subsequent process, is/are coated first with at least one
 anticorrosion layer and then with at least one layer of a paint-like
 coating containing polymers and/or with at least one paint coating.
 After being coated with at least one anticorrosion layer or after
 being coated with at least one layer of a paint-like coating and/or
 with at least one paint coating, the strip is divided into strip
 sections. The coated strip sections are then formed, joined and/or
 coated with at least one (other) paint-like coating and/or paint
 coating. At least one of the anticorrosion layers is formed by
 coating the surface with an aqueous dispersion containing the following in
 addition to water: (a) at least one organic film former containing at least
 one water-soluble or water-dispersed polymer; (b) a quantity of cations
 and/or hexa- or tetrafluoro complexes of cations chosen from a group
 consisting of titanium, zirconium, hafnium, silicon, aluminum and
 boron; and (c) at least one inorg. compound in particle form with an
 average particle diameter measured on a scanning electron microscope of
 0.005 to 0.2 μm . The clean metallic surface is brought into
 contact with the aqueous composition and a film containing particles is formed on
 the metallic surface, this film then being dried and optionally also
 hardened, the dried and optionally, also hardened film having a
 layer thickness of 0.01 to 10 μm . The speed of coating metal
 objects with complex profiles is high using this process and need of
 Cr₆₊ compds. and acids is reduced. The coated products are useful

IT in manufacture of automobile bodies, aircraft, and spacecraft.
 77-92-9, Citric acid, uses 13822-56-5,
 3-Aminopropyltrimethoxysilane
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (anticorrosive primer component; pretreating with anticorrosive
 primers and subsequently coating metallic surfaces with a
 paint-type coating prior to forming)
 RN 77-92-9 HCAPLUS
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



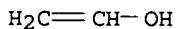
RN 13822-56-5 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5, Polyvinyl alcohol 25608-40-6,
 Polyaspartic acid
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (anticorrosive primer component; pretreating with anticorrosive
 primers and subsequently coating metallic surfaces with a
 paint-type coating prior to forming)
 RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

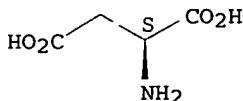


RN 25608-40-6 HCAPLUS
 CN L-Aspartic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 56-84-8
 CMF C4 H7 N O4

Absolute stereochemistry. Rotation (+).



IC ICM C09D005-00

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55, 56

IT 50-21-5D, Lactic acid, titanium complexes 77-92-9, Citric acid, uses 598-62-9, Manganese carbonate 1306-38-3, Cerium dioxide, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconia, uses 1314-36-9, Yttrium oxide, uses 1343-98-2, Silicic acid 1344-28-1, Aluminum oxide, uses 2530-83-8, 3-Glycidyloxypropyltrimethoxysilane 4619-20-9D, zirconium complexes 7429-90-5D, Aluminum, fluoro complexes 7439-89-6D, Iron, compds. 7439-91-0D, Lanthanum, salts 7439-96-5D, Manganese, salts 7439-98-7D, Molybdenum, compds. 7440-02-0D, Nickel, compds. 7440-21-3D, Silicon, fluoro complexes 7440-32-6D, Titanium, fluoro complexes 7440-33-7D, Tungsten, compds. 7440-42-8D, Boron, fluoro complexes 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds. 7440-58-6D, Hafnium, fluoro complexes 7440-67-7D, Zirconium, fluoro complexes 7440-70-2D, Calcium, salts 7585-20-8, Zirconium acetate 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 12021-95-3 13463-67-7, Titania, uses 13822-56-5, 3-Aminopropyltrimethoxysilane 15879-01-3, Triethanolamine titanate 17439-11-1 21645-51-2, Aluminum hydroxide, uses 22829-17-0, Ammonium zirconium carbonate 38497-57-3, Titanium acetate 73215-17-5 133962-46-6

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(anticorrosive primer component; pretreating with anticorrosive primers and subsequently coating metallic surfaces with a paint-type coating prior to forming)

IT 79-10-7D, Acrylic acid, esters, polymers 9002-89-5,

Polyvinyl alcohol 9002-98-6, Polyethylenimine 9003-39-8,

Polyvinylpyrrolidone 9003-53-6, Polystyrene 9011-05-6, Urea

resin 25608-40-6, Polyaspartic acid 26063-13-8,

Polyaspartic acid 59269-51-1, Polyvinylphenol

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(anticorrosive primer component; pretreating with anticorrosive primers and subsequently coating metallic surfaces with a paint-type coating prior to forming)

L130 ANSWER 20 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN

2002:293774 Document No. 136:326995 Method for pretreating and/or coating metallic surfaces with a paint-like coating prior to forming and use of substrates coated in this way. Jung, Christian; Schimakura, Toshiaki; Maurus, Norbert; Domes, Heribert (Chemteall GmbH, Germany). PCT Int. Appl. WO 2002031064 A1 20020418, 146 pp.

DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (German). CODEN: PIXXD2. APPLICATION: WO 2001-EP11737 20011010. PRIORITY: DE 2000-10050537 20001011; DE 2001-10110830 20010306; DE 2001-10119606

20010421; DE 2001-10127721 20010607.

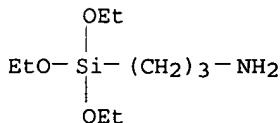
AB The invention relates to a method for coating a metallic strip. The strip or optionally, the strip sections produced from said strip in the subsequent process, is/are first coated with at least one anticorrosion layer - according to an alternative form of embodiment, this can be left out - and then with at least one layer of a paint-like coating containing polymers. After being coated with at least one anticorrosion layer or after being coated with at least one layer of a paint-like coating, the strip is divided into strip sections. The coated strip sections are then formed, joined and/or coated with at least one (other) paint-like coating and/or paint coating. The paint-like coating is formed by coating the surface with an aqueous dispersion containing the following in addition to water: (a) at least one organic film former containing at least one water-soluble or water-dispersed polymer with an acid value of 5 to 200; (b) at least one inorg. compound in particle form with an average particle diameter measured on a scanning electron microscope of 0.005 to 0.3 μm ; and (c) at least one lubricant and/or at least one corrosion inhibitor. The metallic surface that is optionally coated with at least one anticorrosion layer is brought into contact with the aqueous composition and a film containing particles is formed on the metallic surface, this film then being dried and optionally also hardened, the dried and optionally, also hardened film having a layer thickness of 0.01 to 10 μm . The speed of coating metal objects with complex profiles is high using this process and need of Cr⁶⁺ compds. and acids is reduced. The coated products are useful in manufacture of automobile bodies, aircraft, and spacecraft.

IT 919-30-2, 3-Aminopropyltriethoxysilane

RL: TEM (Technical or engineered material use); USES (Uses)
(anticorrosive primer; pretreating and/or coating metallic surfaces with a paint-like coating prior to forming for prevention of corrosion of formed coated product)

RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5, Polyvinyl alcohol 25608-40-6,

Polyaspartic acid

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(pretreating and/or coating metallic surfaces with a paint-like coating prior to forming for prevention of corrosion of formed coated product)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

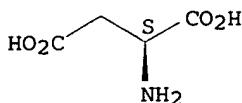


RN 25608-40-6 HCAPLUS
 CN L-Aspartic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 56-84-8
 CMF C4 H7 N O4

Absolute stereochemistry. Rotation (+).



IC ICM C09D005-00
 ICS C09D005-08
 CC 42-2 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55, 56
 IT 598-62-9, Manganese carbonate 674-70-4 674-71-5 763-26-8
 919-30-2, 3-Aminopropyltriethoxysilane 1429-50-1,
 Ethylenediaminetetramethylenephosphonic acid 3071-50-9
 4546-06-9, p-Xylylenediphosphonic acid 4671-77-6,
 1,4-Butanediphosphonic acid 4721-22-6, 1,6-Hexanediphosphonic acid
 5943-21-5, 1,10-Decanediphosphonic acid 5943-66-8,
 1,8-Octanediphosphonic acid 6419-19-8, Aminotrimethylenephosphonic
 acid 7429-90-5D, Aluminum, compds. 7439-89-6D, Iron, compds.
 7439-95-4D, Magnesium, compds. 7439-96-5D, Manganese, compds.
 7439-98-7D, Molybdenum, compds. 7440-02-0D, Nickel, compds.
 7440-32-6D, Titanium, compds. 7440-33-7D, Tungsten, compds.
 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds.
 7440-58-6D, Hafnium, compds. 7440-67-7D, Zirconium, compds.
 7450-59-1, 1,12-Dodecanediphosphonic acid 11101-13-6 12021-95-3
 12781-95-2 15827-60-8, Diethylenetriaminepentamethylenephosphonic
 acid 16068-37-4, 1,2-Bis(triethoxysilyl)ethane 21645-51-2,
 Aluminum hydroxide, uses 23605-74-5 37971-36-1,
 2-Phosphonobutane-1,2,4-tricarboxylic acid 50421-68-6 74748-16-6
 85590-01-8 151861-26-6 159239-33-5, 12-Mercaptododecylphosphonic
 acid 198065-35-9, 12-(Ethylamino)dodecanephosphonic acid
 210237-15-3 216106-45-5 378232-64-5 412916-50-8 412916-52-0
 412916-54-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive primer; pretreating and/or coating metallic
 surfaces with a paint-like coating prior to forming for
 prevention of corrosion of formed coated product)
 IT 79-10-7D, Acrylic acid, esters, polymers with epoxy group-containing
 compds. 9002-89-5, Polyvinyl alcohol 9003-39-8,
 Polyvinylpyrrolidone 9010-77-9, Ethylene-acrylic acid copolymer
 9011-05-6, Urea resin 25608-40-6, Polyaspartic acid
 26063-13-8, Polyaspartic acid 59269-51-1, Polyvinylphenol
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (pretreating and/or coating metallic surfaces with a paint-like
 coating prior to forming for prevention of corrosion of formed
 coated product)

L130 ANSWER 21 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2002:183809 Document No. 136:233662 Coating compositions for
 heat-reflective, superphobic coatings. Rose, Klaus; Heinrich,
 Matthias; Haas, Karl-Heinz; Koehl, Michael (Fraunhofer-Gesellschaft
 Zur Foerderung Der Angewandten Forschung E.V., Germany). Eur. Pat.

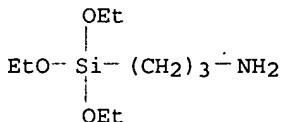
Appl. EP 1186640 A2 20020313, 14 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP 2001-119527 20010814. PRIORITY: DE 2000-10044216 20000907.

AB The title compns., giving films which are hydrophobic, oleophobic, and heat-reflective, contain hydrolyzable hydrocarbylsilanes or their hydrolytic condensates, IR-reflective pigments with particle size 1-50 μm , and solvents and/or dispersing media; the pigments either being present in amts. giving films which are opaque to visible light or other materials giving such opacity being used. A mixture of 3-(diethoxymethylsilyl)propylamine 1.91, (EtO)₄Si 0.208, and H₂O 10 g was pre-hydrolyzed for 20 min, mixed with poly(acrylic acid) 0.5, Ti(OEt)₄ 0.22, Et acetoacetate 0.52, and pigment (Paliochrom R2/237) 0.93 g, and coated (80 μm) on a substrate to give a film which dried tack-free within 1 h and had a contact angle vs. H₂O of 82°.

IT 919-30-2D, hydrolyzates 3179-76-8D,
3-(Diethoxymethylsilyl)propylamine, hydrolyzates 9002-89-5
9002-89-5D, reaction products with (triethoxysilyl)propyl
isocyanate 24801-88-5D, 3-(Triethoxysilyl)propyl
isocyanate, reaction products with poly(vinyl alc.)
93642-68-3D, reaction products with poly(vinyl alc.)
RL: TEM (Technical or engineered material use); USES (Uses)
(coating compns. for heat-reflective, superphobic coatings)

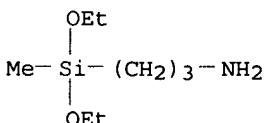
RN 919-30-2 HCPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 3179-76-8 HCPLUS

CN 1-Propanamine, 3-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)

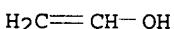


RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C₂ H₄ O

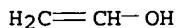


RN 9002-89-5 HCPLUS

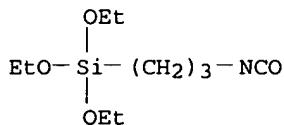
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

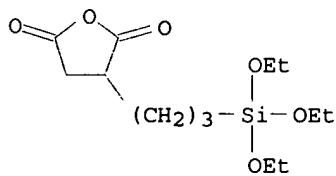
CRN 557-75-5
CMF C2 H4 O



RN 24801-88-5 HCAPLUS
CN Silane, triethoxy(3-isocyanatopropyl)- (9CI) (CA INDEX NAME)



RN 93642-68-3 HCAPLUS
CN 2,5-Furandione, dihydro-3-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IC ICM C09D183-04
ICS C09D183-08; C09D183-14; C09D183-10; C04B041-49
CC 42-10 (Coatings, Inks, and Related Products)
IT 77-58-7, Dibutyltin dilaurate 78-10-4D, Tetraethyl silicate, hydrolyzates 546-68-9, Tetrakisopropyl titanate 919-30-2D, hydrolyzates 1112-39-6D, Dimethoxydimethylsilane, hydrolyzates 2530-85-0D, hydrolyzates 3087-36-3, Tetraethyl titanate 3179-76-8D, 3-(Diethoxymethylsilyl)propylamine, hydrolyzates 7439-92-1D, Lead, lead 7440-56-4D, Germanium, tetraalkoxides 7440-67-7D, Zirconium, tetraalkoxides 9002-89-5 9002-89-5D, reaction products with (triethoxysilyl)propyl isocyanate 9003-01-4, Poly(acrylic acid) 24801-88-5D, 3-(Triethoxysilyl)propyl isocyanate, reaction products with poly(vinyl alc.) 25119-62-4D, Allyl alcohol-styrene copolymer, reaction products with (triethoxysilyl)propyl isocyanate 51851-37-7D, hydrolyzates 93642-68-3D, reaction products with poly(vinyl alc.)
RL: TEM (Technical or engineered material use); USES (Uses) (coating compns. for heat-reflective, superphobic coatings)

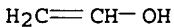
L130 ANSWER 22 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
2002:169098 Document No. 136:218447 Ink-jet printing method using high gloss core-shell particle-containing recording element with good printability. Wexler, Allan (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1184195 A2 20020306, 9 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-203152 20010821. PRIORITY: US 2000-2000/651845 20000831.
AB Title method comprises steps of (A) providing an ink jet printer

responsive to digital data signals, (B) loading the printer with ink jet recording elements comprising (I) a support, (II) ≥ 1 base layer manufactured from hydrophilic or porous materials, and (III) a porous top layer (capable of either retaining or transporting an ink image) comprising a polymeric binder 50-95 weight% and thermally-compliant core-shell particles 5-50 weight%, wherein the shell contains 1 weight% of inorg. colloidal particles with a particle size 0.5-10 μm and the core is derived from 5-99 weight% of thermoplastic polymers having a softening point $>50^\circ$, (C) loading the printer with an ink jet ink composition, and (D) printing on the ink jet recording element using the ink jet ink in response to the digital data signals. Thus, a polyethylene resin-coated paper supported was coated with a base layer prepared from gelatin, poly(vinyl pyrrolidone), and K 90, coated with a top layer prepared from Witcobond 215 and core-shell particles derived from Kao C and Ludox TM 50 in the presence of poly(adipic acid-co-methylaminoethanol), then fused against Kapton at 150° to give an ink-jet printing sheet with gloss 87.9, showing no layer cracking and good ink receptivity.

IT 25213-24-5D, Vinylacetate-vinyl alcohol copolymer, partially hydrolyzed
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base layer-containing; ink-jet printing method using high gloss core-shell particle-containing recording element)
 RN 25213-24-5 HCAPLUS
 CN Acetic acid ethenyl ester, polymer with ethenol (9CI) (CA INDEX NAME)

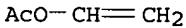
CM 1

CRN 557-75-5
 CMF C2 H4 O



CM 2

CRN 108-05-4
 CMF C4 H6 O2



IT 124350-34-1, Adipic acid-methylaminoethanol copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core-shell adherent; ink-jet printing method using high gloss core-shell particle-containing recording element)
 RN 124350-34-1 HCAPLUS
 CN Hexanedioic acid, polymer with 2-(methylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9
 CMF C6 H10 O4

HO2C-(CH2)4-CO2H

CM 2

CRN 109-83-1
CMF C3 H9 N O

HO-CH2-CH2-NH-CH3

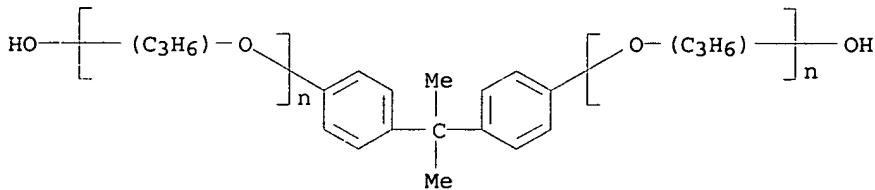
IT 39382-25-7, Kao C
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(core; ink-jet printing method using high gloss core-shell particle-containing recording element)

RN 39382-25-7 HCPLUS

CN 2-Butenedioic acid (2E)-, polymer with α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

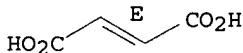
CRN 37353-75-6
CMF (C₃ H₆ O)_n (C₃ H₆ O)_n C₁₅ H₁₆ O₂
CCI IDS, PMS



CM 2

CRN 110-17-8
CMF C₄ H₄ O₄

Double bond geometry as shown.



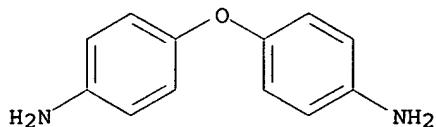
IT 25038-81-7
RL: TEM (Technical or engineered material use); USES (Uses)
(fusing sheet; ink-jet printing method using high gloss core-shell particle-containing recording element)

RN 25038-81-7 HCPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

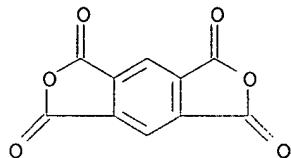
CM 1

CRN 101-80-4
CMF C12 H12 N2 O



CM 2

CRN 89-32-7
CMF C10 H2 O6



IT 9002-89-5, Poly(vinyl alcohol)

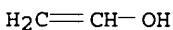
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polymeric binder, Gohsenol Z 200; ink-jet printing method using high gloss core-shell particle-containing recording element)

RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

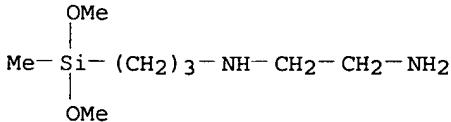


IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyl dimethoxysilane

RL: MOA (Modifier or additive use); USES (Uses)
(silane modifier; ink-jet printing method using high gloss core-shell particle-containing recording element)

RN 3069-29-2 HCPLUS

CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA INDEX NAME)



IC ICM B41M005-00

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

IT 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9012-76-4, Chitosan 25213-24-5D, Vinylacetate-vinyl alcohol copolymer, partially hydrolyzed 27119-07-9, Poly(2-acrylamido-2-methylpropanesulfonic acid) 62744-35-8, Poly(sodium styrenesulfonate)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base layer-containing; ink-jet printing method using high gloss core-shell particle-containing recording element)

IT 124350-34-1, Adipic acid-methylaminoethanol copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core-shell adherent; ink-jet printing method using high gloss core-shell particle-containing recording element)

IT 100-42-5D, Styrene, (co)polymer derivs. 39382-25-7, Kao C
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core; ink-jet printing method using high gloss core-shell particle-containing recording element)

IT 25036-53-7, Kapton 25038-81-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fusing sheet; ink-jet printing method using high gloss core-shell particle-containing recording element)

IT 9002-89-5, Poly(vinyl alcohol)
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polymeric binder, Gohsenol Z 200; ink-jet printing method using high gloss core-shell particle-containing recording element)

IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyl dimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (silane modifier; ink-jet printing method using high gloss core-shell particle-containing recording element)

L130 ANSWER 23 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2002:169097 Document No. 136:218446 High gloss thermoplastic polymer core-inorganic colloidal particle shell-containing ink-jet recording element with good ink absorptivity. Wexler, Allan (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1184194 A2 20020306, 9 pp.
 DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-203140 20010820. PRIORITY: US 2000-2000/652234 20000831.

AB Title element comprises (I) a support, (II) ≥ 1 base layer manufactured from hydrophilic or porous materials, and (III) a porous top layer (capable of either retaining or transporting an ink image) comprising a polymeric binder 50-95 weight% and thermally-compliant core-shell particles 5-50 weight%, wherein the shell contains 1 weight% of inorg. colloidal particles with a particle size 0.5-10 μm and the core is derived from 5-99 weight% of thermoplastic polymers having a softening point $>50^\circ$. Thus, a polyethylene resin-coated paper support was coated with a base layer prepared from gelatin, poly(vinyl pyrrolidone), and K 90, coated with a top layer prepared from Witcobond 215 and core-shell particles derived from Kao C and Ludox TM 50 in the presence of poly(adipic acid-co-methylaminoethanol), then fused against Kapton at 150° to give an ink-jet printing sheet with gloss 87.9, showing no layer cracking and good ink receptivity.

IT 25213-24-5D, Vinylacetate-vinyl alcohol copolymer, partially hydrolyzed
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base layer-containing; manufacture of high gloss core-shell

particle-containing ink-jet recording element)
 RN 25213-24-5 HCPLUS
 CN Acetic acid ethenyl ester, polymer with ethenol (9CI) (CA INDEX NAME)

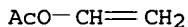
CM 1

CRN 557-75-5
 CMF C2 H4 O



CM 2

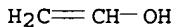
CRN 108-05-4
 CMF C4 H6 O2



IT 9002-89-5, Poly(vinyl alcohol)
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (binder, Gohsenol Z 200; manufacture of high gloss core-shell particle-containing ink-jet recording element)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

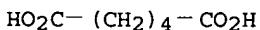
CRN 557-75-5
 CMF C2 H4 O



IT 124350-34-1, Adipic acid-methylaminoethanol copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core-shell adherent; manufacture of high gloss core-shell particle-containing ink-jet recording element)
 RN 124350-34-1 HCPLUS
 CN Hexanedioic acid, polymer with 2-(methylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9
 CMF C6 H10 O4



CM 2

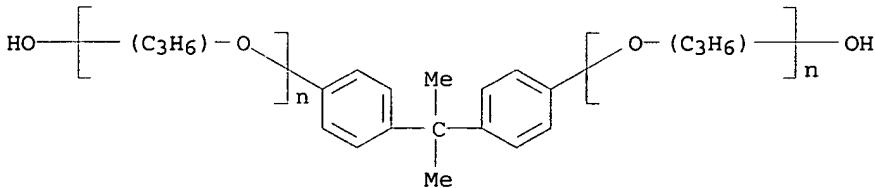
CRN 109-83-1
CMF C3 H9 N O



IT 39382-25-7, Kao C
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(core; manufacture of high gloss core-shell particle-containing ink-jet recording element)
RN 39382-25-7 HCAPLUS
CN 2-Butenedioic acid (2E)-, polymer with α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

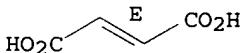
CRN 37353-75-6
CMF (C₃ H₆ O)_n (C₃ H₆ O)_n C₁₅ H₁₆ O₂
CCI IDS, PMS



CM 2

CRN 110-17-8
CMF C₄ H₄ O₄

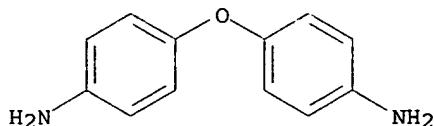
Double bond geometry as shown.



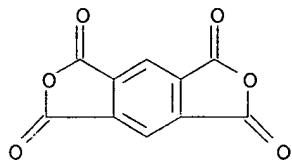
IT 25038-81-7
RL: TEM (Technical or engineered material use); USES (Uses)
(fusing; manufacture of high gloss core-shell particle-containing ink-jet recording element)
RN 25038-81-7 HCAPLUS
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 101-80-4
CMF C₁₂ H₁₂ N₂ O



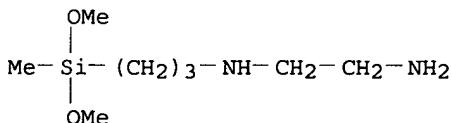
CM 2

CRN 89-32-7
CMF C10 H2 O6

IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyl dimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (silane modifier; manufacture of high gloss core-shell particle-containing ink-jet recording element)

RN 3069-29-2 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA INDEX NAME)



IC ICM B41M005-00
 CC 42-12 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74

IT 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-39-8, K 90 9012-76-4, Chitosan 25213-24-5D, Vinylacetate-vinyl alcohol copolymer, partially hydrolyzed 27119-07-9, Poly(2-acrylamido-2-methylpropanesulfonic acid) 62744-35-8, Poly(sodium styrenesulfonate)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (base layer-containing; manufacture of high gloss core-shell particle-containing ink-jet recording element)

IT 9002-89-5, Poly(vinyl alcohol)
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (binder, Gohsenol Z 200; manufacture of high gloss core-shell particle-containing ink-jet recording element)

IT 124350-34-1, Adipic acid-methylaminoethanol copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core-shell adherent; manufacture of high gloss core-shell particle-containing ink-jet recording element)

IT 39382-25-7, Kao C

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (core; manufacture of high gloss core-shell particle-containing ink-jet recording element)

IT 25036-53-7, Kapton 25038-81-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fusing; manufacture of high gloss core-shell particle-containing ink-jet recording element)

IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyl dimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (silane modifier; manufacture of high gloss core-shell particle-containing ink-jet recording element)

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2001:747688 Document No. 135:290378 Compostable, degradable plastic compositions and monofilament, shaped article or film articles.

Holy, Norman L. (USA). PCT Int. Appl. WO 2001074555 A1 20011011, 153 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English).
 CODEN: PIXXD2. APPLICATION: WO 2001-US10561 20010330. PRIORITY: US 2000-PV193449 20000331.

AB Thermoplastic compns. which are degradable and/or compostable may be used as a coating, e.g., of paper, to achieve a stronger article. These compns. have the advantage over existing biodegradable and compostable compns. by exhibiting a higher dimensional stability and comparatively low cost. The thermoplastic may consist of polyamide-polyester, optionally other polymer, plasticizer, and crosslinker. An extruded strand sample of caprolactam/adipic acid/diol copolymer 50, ethylene-vinyl alc. copolymer 40, and poly(vinyl alc.) 10 parts had a break strength >20 lbs.

IT 9002-89-5, Poly(vinyl alcohol)
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (Airvol 205; compostable, degradable plastic compns. and monofilament, shaped article or film articles)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

IT 365459-58-1P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (also fibrous; compostable, degradable plastic compns. and monofilament, shaped article or film articles)

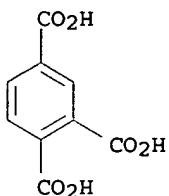
RN 365459-58-1 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,4-butanediol,

hexahydro-2H-azepin-2-one and hexanedioic acid (9CI) (CA INDEX
NAME)

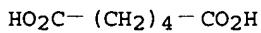
CM 1

CRN 528-44-9
CMF C9 H6 O6



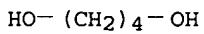
CM 2

CRN 124-04-9
CMF C6 H10 O4



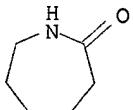
CM 3

CRN 110-63-4
CMF C4 H10 O2



CM 4

CRN 105-60-2
CMF C6 H11 N O

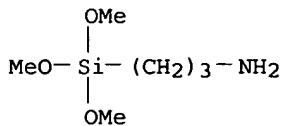


IT 13822-56-5D, Aminopropyltrimethoxysilane, derivatized starch
24938-37-2, Poly(ethylene adipate) 25067-34-9,
Ethylene-vinyl alcohol copolymer 25569-53-3, Poly(ethylene
succinate) 25777-14-4 26335-34-2, Adipic
acid- ϵ -caprolactam-1,6-hexanediol copolymer
61256-56-2 254760-80-0, Bak 402-005
365459-59-2 365459-60-5 365459-61-6
RL: POF (Polymer in formulation); TEM (Technical or engineered
material use); USES (Uses)

(compostable, degradable plastic compns. and monofilament, shaped article or film articles)

RN 13822-56-5 HCPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

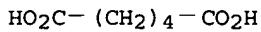


RN 24938-37-2 HCPLUS

CN Hexanedioic acid, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

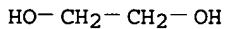
CM 1

CRN 124-04-9
CMF C6 H10 O4



CM 2

CRN 107-21-1
CMF C2 H6 O2

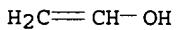


RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



CM 2

CRN 74-85-1
CMF C2 H4

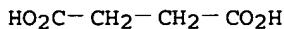


RN 25569-53-3 HCPLUS

CN Butanedioic acid, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

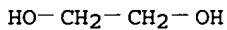
CM 1

CRN 110-15-6
CMF C4 H6 O4



CM 2

CRN 107-21-1
CMF C2 H6 O2



RN 25777-14-4 HCAPLUS
CN Butanedioic acid, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)

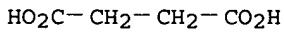
CM 1

CRN 110-63-4
CMF C4 H10 O2



CM 2

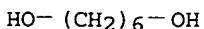
CRN 110-15-6
CMF C4 H6 O4



RN 26335-34-2 HCAPLUS
CN Hexanedioic acid, polymer with hexahydro-2H-azepin-2-one and 1,6-hexanediol (9CI) (CA INDEX NAME)

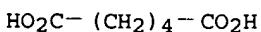
CM 1

CRN 629-11-8
CMF C6 H14 O2

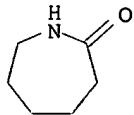


CM 2

CRN 124-04-9
CMF C6 H10 O4



CM 3

CRN 105-60-2
CMF C6 H11 N ORN 61256-56-2 HCPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol and
hexahydro-2H-azepin-2-one (9CI) (CA INDEX NAME)

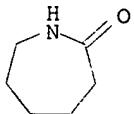
CM 1

CRN 124-04-9
CMF C6 H10 O4HO₂C-(CH₂)₄-CO₂H

CM 2

CRN 110-63-4
CMF C4 H10 O2HO-(CH₂)₄-OH

CM 3

CRN 105-60-2
CMF C6 H11 N ORN 254760-80-0 HCPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,6-hexanediamine and
2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 124-09-4
CMF C6 H16 N2

H₂N—(CH₂)₆—NH₂

CM 2

CRN 124-04-9
CMF C₆ H₁₀ O₄

HO₂C—(CH₂)₄—CO₂H

CM 3

CRN 111-46-6
CMF C₄ H₁₀ O₃

HO—CH₂—CH₂—O—CH₂—CH₂—OH

CM 4

CRN 110-63-4
CMF C₄ H₁₀ O₂

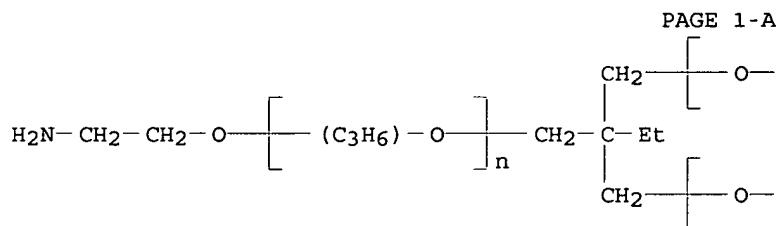
HO—(CH₂)₄—OH

RN 365459-59-2 HCPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, hexahydro-2H-azepin-2-one and α -hydro- ω -(2-aminomethylethoxy)poly[oxy(methyl-1,2-ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

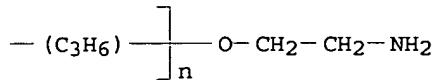
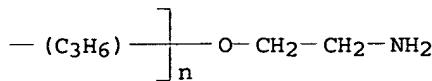
CM 1

CRN 39423-51-3
CMF (C₃ H₆ O)_n (C₃ H₆ O)_n (C₃ H₆ O)_n C₁₅ H₃₅ N₃ O₃
CCI IDS, PMS

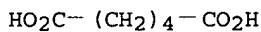


3 (D1-Me)

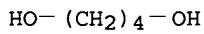
PAGE 1-B



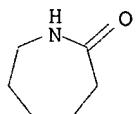
CM 2

CRN 124-04-9
CMF C6 H10 O4

CM 3

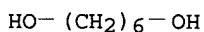
CRN 110-63-4
CMF C4 H10 O2

CM 4

CRN 105-60-2
CMF C6 H11 N O

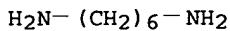
RN 365459-60-5 HCPLUS
 CN 1,4-Benzenediacarboxylic acid, polymer with 1,6-hexanediamine, hexanedioic acid and 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 629-11-8
CMF C6 H14 O2

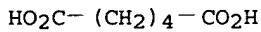
CM 2

CRN 124-09-4
 CMF C6 H16 N2



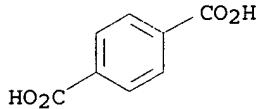
CM 3

CRN 124-04-9
 CMF C6 H10 O4



CM 4

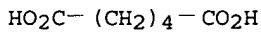
CRN 100-21-0
 CMF C8 H6 O4



RN 365459-61-6 HCPLUS
 CN Hexanedioic acid, polymer with hexahydro-2H-azepin-2-one,
 2,2'-oxybis[ethanol] and 1,2,3-propanetriol (9CI) (CA INDEX NAME)

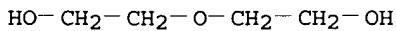
CM 1

CRN 124-04-9
 CMF C6 H10 O4



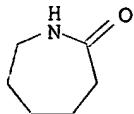
CM 2

CRN 111-46-6
 CMF C4 H10 O3

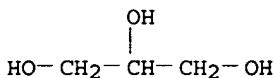


CM 3

CRN 105-60-2
 CMF C6 H11 N O



CM 4

CRN 56-81-5
CMF C3 H8 O3

IC ICM B29C043-00
 ICS C08L001-00; C08L003-00; C08L005-00; C08L023-00; C08L029-04;
 C08L067-04; C08L077-12; D02G003-00

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 38, 42

IT 9002-89-5, Poly(vinyl alcohol)
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (Airvol 205; compostable, degradable plastic compns. and monofilament, shaped article or film articles)

IT 365459-58-1P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (also fibrous; compostable, degradable plastic compns. and monofilament, shaped article or film articles)

IT 106-89-8D, Epichlorohydrin, derivatized starch 151-56-4D,
 Aziridine, derivatized starch, uses 1398-61-4, Chitin 9004-34-6,
 Cellulose, uses 9005-25-8, Starch, uses 9005-25-8D, Starch,
 derivs., uses 9005-53-2D, Lignin, derivs., uses 9005-82-7,
 Amylose 9037-22-3, Amylopectin 13822-56-5D,
 Aminopropyltrimethoxysilane, derivatized starch 24937-05-1,
 Poly(ethylene adipate) 24938-37-2, Poly(ethylene adipate) 24980-41-4, Polycaprolactone 25037-67-6, ϵ -Caprolactam- ϵ -caprolactone copolymer 25067-34-9,
 Ethylene-vinyl alcohol copolymer 25102-39-0, ϵ -Caprolactone-dimethyl terephthalate-ethylene glycol copolymer 25190-06-1, Polytetramethylene ether glycol 25248-42-4,
 Polycaprolactone 25322-68-3, Polyethylene glycol 25322-69-4,
 Polypropylene glycol 25569-53-3, Poly(ethylene succinate) 25667-11-2, Poly(ethylene succinate) 25777-14-4
 26009-03-0, Polyglycolic acid 26023-30-3, Poly{oxy(1-methyl-2-oxo-1,2-ethanediyl)} 26063-00-3, Poly(hydroxybutyrate) 26100-51-6,
 Polylactic acid 26124-68-5, Polyglycolic acid 26247-20-1,
 Poly(butylene succinate) 26335-34-2, Adipic acid- ϵ -caprolactam-1,6-hexanediol copolymer 26744-04-7
 31762-63-7 61256-56-2 102190-94-3, Poly(hydroxyvaleric acid) 160555-53-3, Biopol 169599-45-5, ϵ -Caprolactam-lactic acid copolymer 254760-80-0, Bak 402-005
 365459-59-2 365459-60-5 365459-61-6
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(compostable, degradable plastic compns. and monofilament, shaped article or film articles)

L130 ANSWER 25 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2001:676866 Document No. 135:243837 Gas, oil and flavor barrier coating compositions containing bis-silane and multifunctional acrylate compounds for packaging materials. Seibel, Lisa M.; Nanavati, Shrenik M.; Wyman, John E.; Rangwalla, Imtiaz J. (Dow Corning Corporation, USA; EG Technology Partners, L.P.). PCT Int. Appl. WO 2001066656 A2 20010913, 30 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US5452 20010221. PRIORITY: US 2000-517901 20000303.

AB The moisture-curable compns., used for coating on packaging substrates made up of plastics such as polyolefin, polyesters and vinyl polymers, cellulose, papers, etc., or/and for preparing laminates with addnl. substrate, comprise a reaction product obtained from:
 (A) a bis-silane compound represented by a general formula:

$$R1bX3-bSizSix3-bR1b$$
, wherein R1=alkyl, X=C1-4 alkoxy, halogen, oxime, acyloxy, Z=R2NH(R2NH)pR2, R2=C1-12 alkylene, b=0-3 and p=0 or 1, (B) a multifunctional acrylate having mol. weight 100-3000, (C) ethylenically unsatd. acid, and (D) optionally an amino-containing silane.

IT 360046-35-1P 360046-36-2P 360046-37-3P

360046-38-4P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coating compns. containing bis-silane and multifunctional acrylate for gas, oil and flavor barrier improvement of packaging materials)

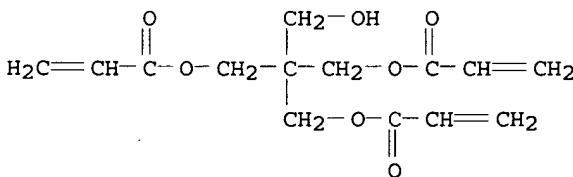
RN 360046-35-1 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 3524-68-3

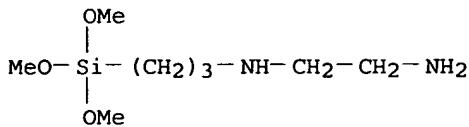
CMF C14 H18 O7



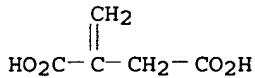
CM 2

CRN 1760-24-3

CMF C8 H22 N2 O3 Si

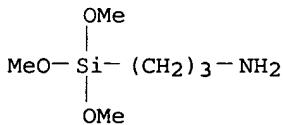


CM 3

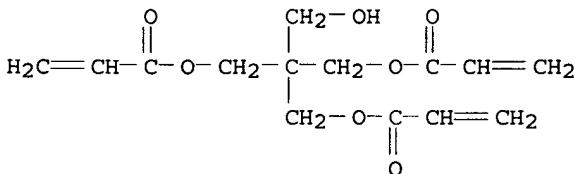
CRN 97-65-4
CMF C5 H6 O4

RN 360046-36-2 HCPLUS
 CN Butanedioic acid, methylene-, polymer with 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 3-(trimethoxysilyl)-1-propanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

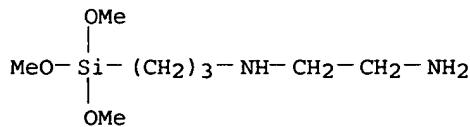
CRN 13822-56-5
CMF C6 H17 N O3 Si

CM 2

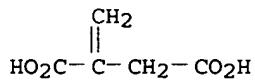
CRN 3524-68-3
CMF C14 H18 O7

CM 3

CRN 1760-24-3
CMF C8 H22 N2 O3 Si

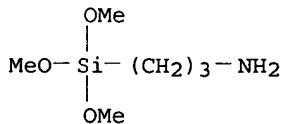


CM 4

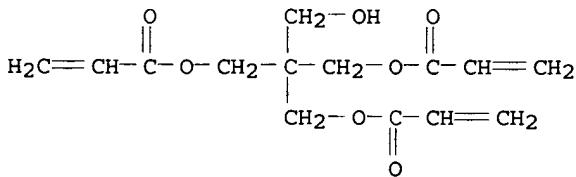
CRN 97-65-4
CMF C5 H6 O4

RN 360046-37-3 HCAPLUS
 CN Butanedioic acid, methylene-, polymer with 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

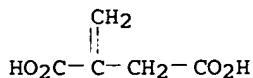
CRN 13822-56-5
CMF C6 H17 N O3 Si

CM 2

CRN 3524-68-3
CMF C14 H18 O7

CM 3

CRN 97-65-4
CMF C5 H6 O4



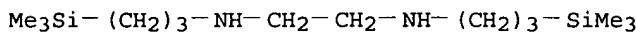
RN 360046-38-4 HCPLUS

CN Butanedioic acid, methylene-, polymer with N,N'-bis[3-(trimethylsilyl)propyl]-1,2-ethanediamine, 2-(hydroxymethyl)-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 92074-13-0

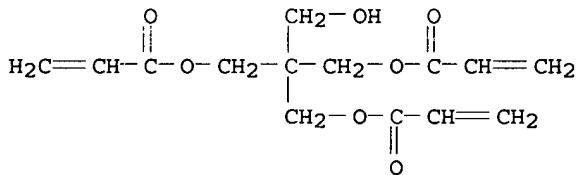
CMF C14 H36 N2 Si2



CM 2

CRN 3524-68-3

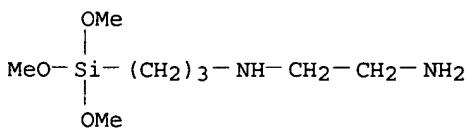
CMF C14 H18 O7



CM 3

CRN 1760-24-3

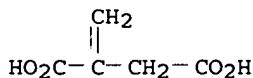
CMF C8 H22 N2 O3 Si



CM 4

CRN 97-65-4

CMF C5 H6 O4



IT 9002-89-5, Poly(vinyl alcohol) 25038-59-9, PET
 (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; coating compns. containing bis-silane and multifunctional
 acrylate for gas, oil and flavor barrier improvement of packaging
 materials)

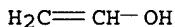
RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

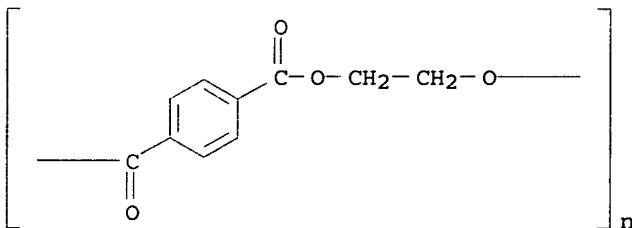
CM 1

CRN 557-75-5

CMF C2 H4 O



RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C09D004-06
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 360046-35-1P 360046-36-2P 360046-37-3P
 360046-38-4P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (coating compns. containing bis-silane and multifunctional acrylate
 for gas, oil and flavor barrier improvement of packaging
 materials)
 IT 9002-85-1, Poly(vinylidene chloride) 9002-86-2, PVC 9002-88-4,
 Polyethylene 9002-89-5, Poly(vinyl alcohol) 9003-53-6,
 Polystyrene 9010-77-9, Acrylic acid-ethylene copolymer
 9020-32-0, Ethylene glycol-naphthalenedicarboxylic acid copolymer
 9020-73-9, Ethylene glycol-naphthalenedicarboxylic acid copolymer,
 sru 24937-78-8, Ethylene-vinyl acetate copolymer 24937-78-8D,
 Ethylene-vinyl acetate copolymer, hydrolyzed 25014-41-9,
 Polyacrylonitrile 25038-59-9, PET (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; coating compns. containing bis-silane and multifunctional
 acrylate for gas, oil and flavor barrier improvement of packaging
 materials)

L130 ANSWER 26 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 2001:676865 Document No. 135:243836 Gas, oil and flavor barrier
 coating compositions containing aminosilane and phenolic compounds
 for packaging materials. Nanavati, Shrenik M. (Dow Corning
 Corporation, USA). PCT Int. Appl. WO 2001066655 A1 20010913, 27 pp.
 DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR,
 BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
 LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ,
 CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU,
 MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN:
 PIXXD2. APPLICATION: WO 2001-US5573 20010221. PRIORITY: US
 2000-518739 20000303.

AB The silsesquioxane-based compns., used for coating on packaging
 substrates made up of plastics such as polyolefin, polyesters and
 vinyl polymers, cellulose, papers, etc., or/and for preparing laminates
 with addnl. substrate, comprise a reaction product, free of
 phenol-formaldehyde cresol resin, obtained from: (A) an amino-containing
 silane compound represented by a general formula: $Rm(RO)3-mSi(R2NR1)nR1$, wherein R=H, or C1-6 alkyl, R1=H, alkyl, aryl,
 arylalkyl, methacrylate, or alkylaryl, R2=C1-12 alkylene, C6-12
 arylene, C1-16 hydrocarbon having alc., alc. ether, ester, amide,
 urea, thiourea or polyether group, m=0 or 1 and n=1-3, and (B) a
 phenolic compound

IT 359894-76-1P 359894-77-2P 359894-78-3P
 359894-79-4P 359894-80-7P 359894-81-8P
 359894-82-9P 359894-83-0P 359894-84-1P
 359894-85-2P 359894-86-3P 359894-87-4P
 359894-88-5P

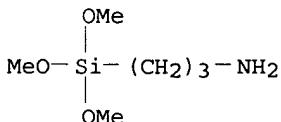
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (gas, oil and flavor barrier coating compns. containing aminosilane
 and phenolic compds. for packaging materials)

RN 359894-76-1 HCPLUS

CN 1,2,3-Benzenetriol, polymer with 3-(trimethoxysilyl)-1-propanamine
 (9CI) (CA INDEX NAME)

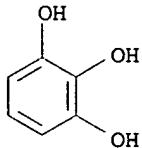
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

CRN 87-66-1
 CMF C6 H6 O3



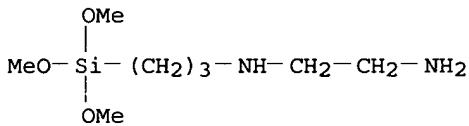
RN 359894-77-2 HCPLUS

CN 1,2,3-Benzenetriol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 1760-24-3

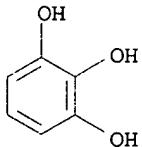
CMF C8 H22 N2 O3 Si



CM 2

CRN 87-66-1

CMF C6 H6 O3



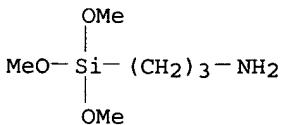
RN 359894-78-3 HCPLUS

CN 1,4-Benzenediol, polymer with 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 13822-56-5

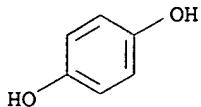
CMF C6 H17 N O3 Si



CM 2

CRN 123-31-9

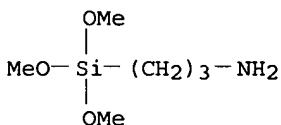
CMF C6 H6 O2



RN 359894-79-4 HCAPLUS
 CN 1,5-Naphthalenediol, polymer with 3-(trimethoxysilyl)-1-propanamine
 (9CI) (CA INDEX NAME)

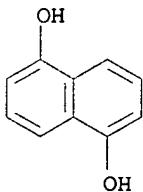
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

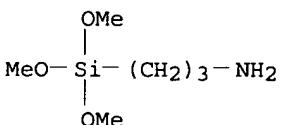
CRN 83-56-7
 CMF C10 H8 O2



RN 359894-80-7 HCAPLUS
 CN 2,7-Naphthalenediol, polymer with 3-(trimethoxysilyl)-1-propanamine
 (9CI) (CA INDEX NAME)

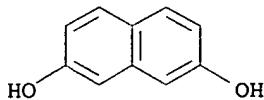
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

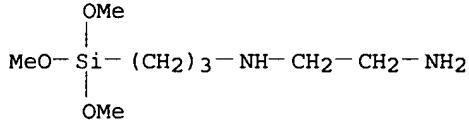
CRN 582-17-2
 CMF C10 H8 O2



RN 359894-81-8 HCPLUS
 CN 1,4-Benzenediol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

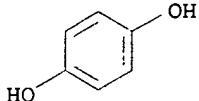
CM 1

CRN 1760-24-3
 CMF C8 H22 N2 O3 Si



CM 2

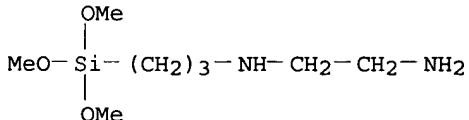
CRN 123-31-9
 CMF C6 H6 O2



RN 359894-82-9 HCPLUS
 CN 1,5-Naphthalenediol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

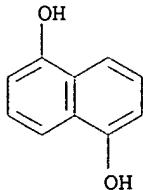
CRN 1760-24-3
 CMF C8 H22 N2 O3 Si



CM 2

CRN 83-56-7

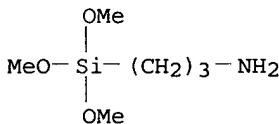
CMF C10 H8 O2



RN 359894-83-0 HCAPLUS
 CN Phenol, polymer with 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

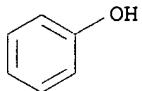
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

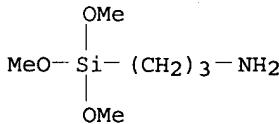
CRN 108-95-2
 CMF C6 H6 O



RN 359894-84-1 HCAPLUS
 CN 2-Naphthalenol, polymer with 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

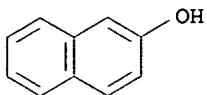
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si

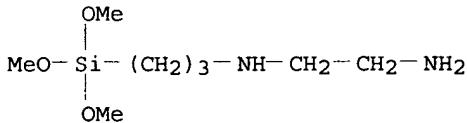


CM 2

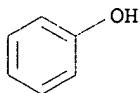
CRN 135-19-3
CMF C10 H8 O



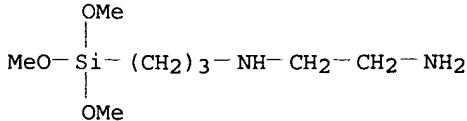
RN 359894-85-2 HCAPLUS
CN Phenol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)
CM 1
CRN 1760-24-3
CMF C8 H22 N2 O3 Si



CM 2
CRN 108-95-2
CMF C6 H6 O

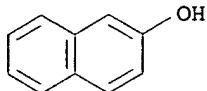


RN 359894-86-3 HCAPLUS
CN 2-Naphthalenol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)
CM 1
CRN 1760-24-3
CMF C8 H22 N2 O3 Si



CM 2
CRN 135-19-3

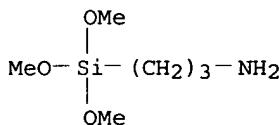
CMF C10 H8 O



RN 359894-87-4 HCPLUS
 CN 1,4-Cyclohexanediol, polymer with 3-(trimethoxysilyl)-1-propanamine
 (9CI) (CA INDEX NAME)

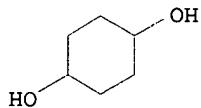
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

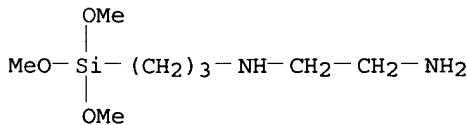
CRN 556-48-9
 CMF C6 H12 O2



RN 359894-88-5 HCPLUS
 CN 1,4-Cyclohexanediol, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

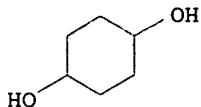
CM 1

CRN 1760-24-3
 CMF C8 H22 N2 O3 Si



CM 2

CRN 556-48-9
 CMF C6 H12 O2



IT 9002-89-5, Poly(vinyl alcohol) 25038-59-9, PET
 (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; gas, oil and flavor barrier coating compns. containing
 aminosilane and phenolic compds. for packaging materials)

RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

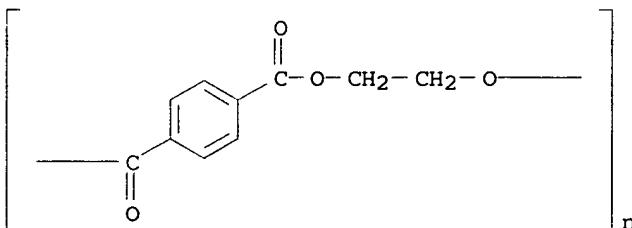
CM 1

CRN 557-75-5

CMF C2 H4 O



RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C09D004-00
 ICS C09D183-08; C08J007-04
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 359887-58-4P 359887-60-8P 359887-62-0P 359887-63-1P
 359887-64-2P 359889-90-0P 359894-76-1P
 359894-77-2P 359894-78-3P 359894-79-4P
 359894-80-7P 359894-81-8P 359894-82-9P
 359894-83-0P 359894-84-1P 359894-85-2P
 359894-86-3P 359894-87-4P 359894-88-5P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (gas, oil and flavor barrier coating compns. containing aminosilane
 and phenolic compds. for packaging materials)
 IT 9002-85-1, Poly(vinylidene chloride) 9002-86-2, PVC 9002-88-4,
 Polyethylene 9002-89-5, Poly(vinyl alcohol) 9003-53-6,
 Polystyrene 9010-77-9, Acrylic acid-ethylene copolymer
 9020-73-9, Polyethylene naphthalate 24937-78-8, Ethylene-vinyl
 acetate copolymer 24937-78-8D, Ethylene-vinyl acetate copolymer,
 hydrolyzed 25014-41-9, Polyacrylonitrile 25038-59-9, PET
 (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; gas, oil and flavor barrier coating compns. containing

aminosilane and phenolic compds. for packaging materials)

L130 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 2001:676864 Document No. 135:243835 Coating compositions containing bisaminosilane compounds for packaging materials to improve gas, oil and flavor barrier properties. Nanavati, Shrenik M. (Dow Corning Corporation, USA). PCT Int. Appl. WO 2001066654 A1 20010913, 27 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US5522 20010221. PRIORITY: US 2000-518736 20000303.

AB The silsesquioxane-based compns., used for coating on packaging substrates made up of plastics such as polyolefin, polyesters and vinyl polymers, cellulose, papers, etc., or/and for preparing laminates with addnl. substrate, comprise: (A) a bisaminosilane compound represented by a general formula: R1bX3-bSiZSiX3-bR1b, wherein R1=alkyl, X=C1-4 alkoxy, oxime or acyloxy, Z=R2NH(R2NH)pR2 with R2=C1-12 alkylene, b=0-3, and p=0 or 1, (B) a phenolic compound and a solvent. Two examples of A were bis(trimethoxysilylpropyl)amine and N,N'-Bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine.

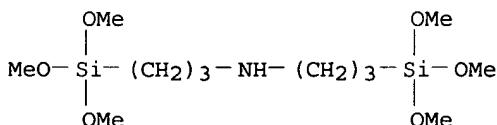
IT 359887-30-2P 359887-33-5P 359887-35-7P
 359887-37-9P 359887-39-1P 359887-41-5P
 359887-43-7P 359887-45-9P 359887-46-0P
 359887-47-1P 359887-48-2P 359887-49-3P
 359887-50-6P 359887-51-7P 359887-52-8P
 359887-54-0P 359887-56-2P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (silsesquioxane-based coating compns. for packaging materials to improve gas, oil and flavor barrier properties)

RN 359887-30-2 HCAPLUS

CN 1,2,3-Benzenetriol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

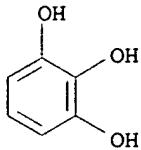
CM 1

CRN 82985-35-1
 CMF C12 H31 N O6 Si2



CM 2

CRN 87-66-1
 CMF C6 H6 O3



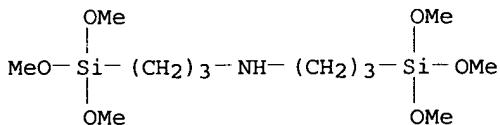
RN 359887-33-5 HCPLUS

CN 1,2,4-Benzenetriol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 82985-35-1

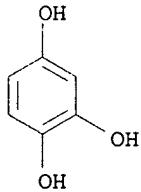
CMF C12 H31 N O6 Si2



CM 2

CRN 533-73-3

CMF C6 H6 O3



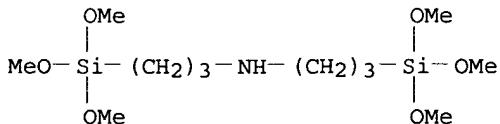
RN 359887-35-7 HCPLUS

CN 1,3,5-Benzenetriol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

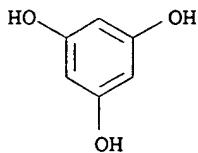
CRN 82985-35-1

CMF C12 H31 N O6 Si2



CM 2

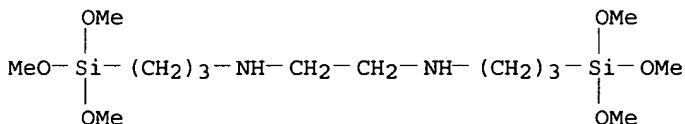
CRN 108-73-6
CMF C6 H6 O3



RN 359887-37-9 HCAPLUS
CN 1,2,3-Benzenetriol, polymer with N,N'-bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

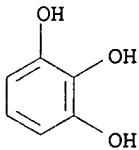
CM 1

CRN 68845-16-9
CMF C14 H36 N2 O6 Si2



CM 2

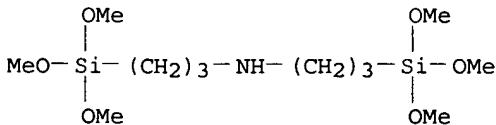
CRN 87-66-1
CMF C6 H6 O3



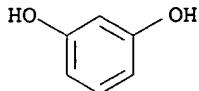
RN 359887-39-1 HCAPLUS
CN 1,3-Benzenediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

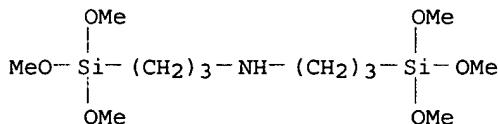
CRN 82985-35-1
CMF C12 H31 N O6 Si2



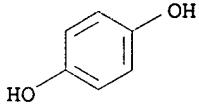
CM 2

CRN 108-46-3
CMF C6 H6 O2RN 359887-41-5 HCPLUS
CN 1,4-Benzenediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

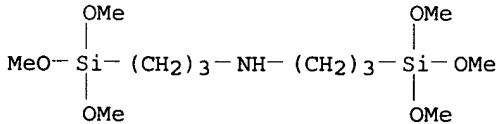
CM 1

CRN 82985-35-1
CMF C12 H31 N O6 Si2

CM 2

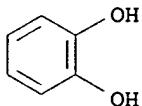
CRN 123-31-9
CMF C6 H6 O2RN 359887-43-7 HCPLUS
CN 1,2-Benzenediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

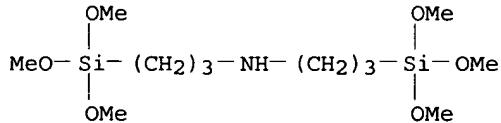
CRN 82985-35-1
CMF C12 H31 N O6 Si2

CM 2

CRN 120-80-9
CMF C6 H6 O2

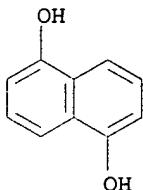


RN 359887-45-9 HCPLUS
CN 1,5-Naphthalenediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)
CM 1
CRN 82985-35-1
CMF C12 H31 N O6 Si2

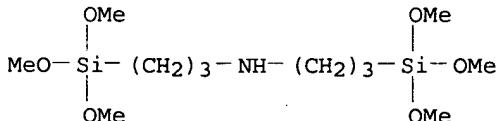


CM 2

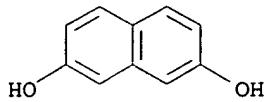
CRN 83-56-7
CMF C10 H8 O2



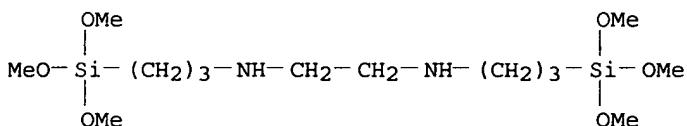
RN 359887-46-0 HCPLUS
CN 2,7-Naphthalenediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)
CM 1
CRN 82985-35-1
CMF C12 H31 N O6 Si2



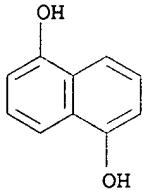
CM 2

CRN 582-17-2
CMF C10 H8 O2RN 359887-47-1 HCPLUS
CN 1,5-Naphthalenediol, polymer with N,N'-bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

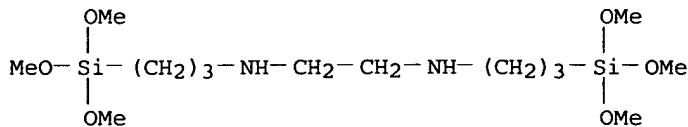
CRN 68845-16-9
CMF C14 H36 N2 O6 Si2

CM 2

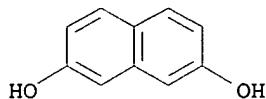
CRN 83-56-7
CMF C10 H8 O2RN 359887-48-2 HCPLUS
CN 2,7-Naphthalenediol, polymer with N,N'-bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

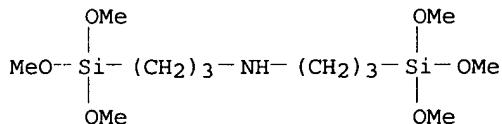
CRN 68845-16-9
CMF C14 H36 N2 O6 Si2



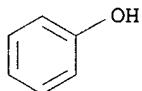
CM 2

CRN 582-17-2
CMF C10 H8 O2RN 359887-49-3 HCPLUS
CN Phenol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

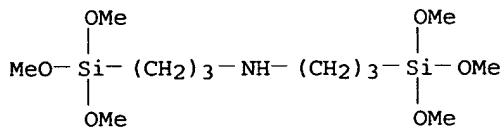
CRN 82985-35-1
CMF C12 H31 N O6 Si2

CM 2

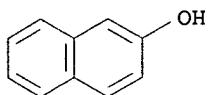
CRN 108-95-2
CMF C6 H6 ORN 359887-50-6 HCPLUS
CN 2-Naphthalenol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

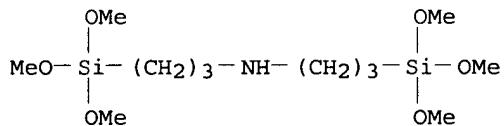
CRN 82985-35-1
CMF C12 H31 N O6 Si2



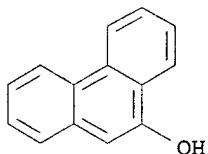
CM 2

CRN 135-19-3
CMF C10 H8 ORN 359887-51-7 HCPLUS
CN 9-Phenanthrenol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

CM 1

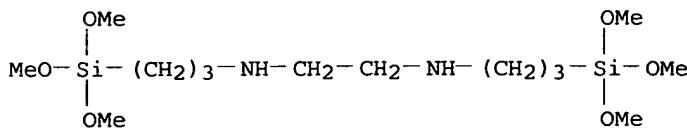
CRN 82985-35-1
CMF C12 H31 N O6 Si2

CM 2

CRN 484-17-3
CMF C14 H10 ORN 359887-52-8 HCPLUS
CN Phenol, polymer with N,N'-bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

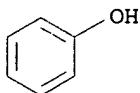
CM 1

CRN 68845-16-9
CMF C14 H36 N2 O6 Si2



CM 2

CRN 108-95-2
CMF C6 H6 O

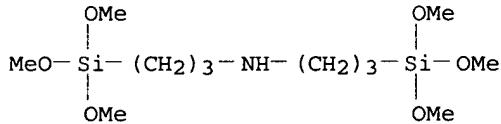


RN 359887-54-0 HCAPLUS

CN 1,4-Cyclohexanediol, polymer with 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine (9CI) (CA INDEX NAME)

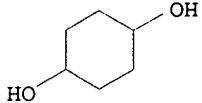
CM 1

CRN 82985-35-1
CMF C12 H31 N 06 Si2



CM 2

CRN 556-48-9
CMF C6 H12 O2

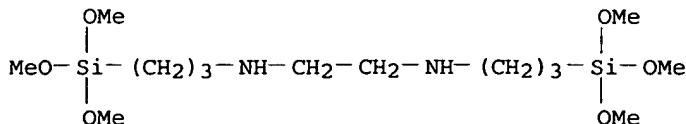


RN 359887-56-2 HCAPLUS

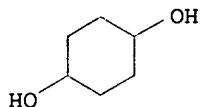
CN 1,4-Cyclohexanediol, polymer with N,N'-bis[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

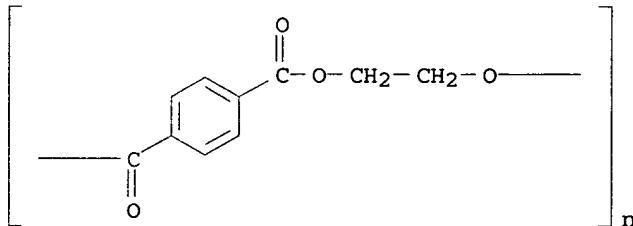
CRN 68845-16-9
CMF C14 H36 N2 O6 Si2



CM 2

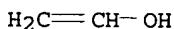
CRN 556-48-9
CMF C6 H12 O2

IT 25038-59-9, Polyethylene terephthalate, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate film; silsesquioxane-based coating compns. for
 packaging materials to improve gas, oil and flavor barrier
 properties)
 RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; silsesquioxane-based coating compns. for packaging
 materials to improve gas, oil and flavor barrier properties)
 RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

IC ICM C09D004-00
 ICS C08J007-04
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 359887-30-2P 359887-33-5P 359887-35-7P

359887-37-9P 359887-39-1P 359887-41-5P
 359887-43-7P 359887-45-9P 359887-46-0P
 359887-47-1P 359887-48-2P 359887-49-3P
 359887-50-6P 359887-51-7P 359887-52-8P
 359887-54-0P 359887-56-2P 359887-58-4P
 359887-60-8P 359887-62-0P 359887-63-1P 359887-64-2P
 359889-90-0P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (silsesquioxane-based coating compns. for packaging materials to improve gas, oil and flavor barrier properties)

IT 9003-07-0, Polypropylene 25038-59-9, Polyethylene terephthalate, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate film; silsesquioxane-based coating compns. for packaging materials to improve gas, oil and flavor barrier properties)

IT 9002-85-1, Poly(vinylidene chloride) 9002-86-2, PVC 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl alcohol) 9003-53-6, Polystyrene 9010-77-9, Acrylic acid-ethylene copolymer 9020-73-9, Polyethylene naphthalate 24937-78-8, Ethylene-vinyl acetate copolymer 24937-78-8D, Ethylene-vinyl acetate copolymer, hydrolyzed 24968-11-4, Polyethylene naphthalate 25014-41-9, Polyacrylonitrile

RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; silsesquioxane-based coating compns. for packaging materials to improve gas, oil and flavor barrier properties)

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2001:346929 Document No. 134:341388 Gas- and water-vapor-barrier flexible packaging films having alkali-resistant anchor-coat layers. Kitahara, Satonori; Hayashi, Kenji; Komori, Tsunenori; Matsuo, Ryukichi; Kanetaka, Takeshi (Toppan Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001129915 A2 20010515, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-313677 19991104.

AB The films, exhibiting good transparency and processability, have anchor-coat layers of alkali-resistant resins and barrier layers of alkali metal polysilicates $M_2O.nSiO_2$ [M = alkali metals essentially containing Li; n = 1-30 (molar ratio)]. The films may comprise polyolefin supports. Thus, an oriented PP film (Pylen P 2102) was successively coated with a 1% Coronate L (TDI) solution and with an aqueous solution of $Li_2O.5SiO_2$ and R 2105 (silane-modified PVA), dried, and laminated with a sealant PP film to give a packaging film showing O permeability 6.8 initially and 24.7 $cm^3/m^2 day atm$ after humidification, resp., and peeling strength 2.5 initially and 2.1 N/15 mm after humidification, resp.

IT 308278-49-1P, Coronate L-UR 1400 copolymer

308278-53-7P, TDI-UR 1400 copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anchor-coat layers; gas- and water-vapor-barrier flexible packaging films with alkali-resistant anchor-coat films)

RN 308278-49-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with Coronate L, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 39278-79-0

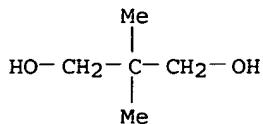
CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

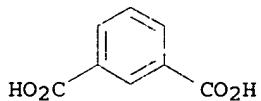
CM 2

CRN 126-30-7
CMF C5 H12 O2



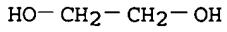
CM 3

CRN 121-91-5
CMF C8 H6 O4



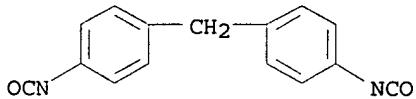
CM 4

CRN 107-21-1
CMF C2 H6 O2



CM 5

CRN 101-68-8
CMF C15 H10 N2 O2



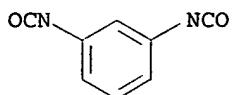
RN 308278-53-7 HCPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

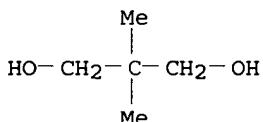
CRN 26471-62-5
CMF C9 H6 N2 O2

CCI IDS

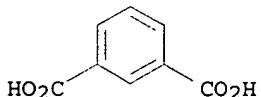


D1-Me

CM 2

CRN 126-30-7
CMF C5 H12 O2

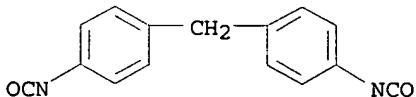
CM 3

CRN 121-91-5
CMF C8 H6 O4

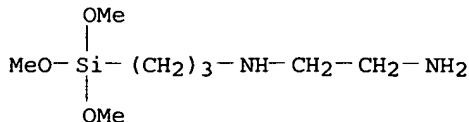
CM 4

CRN 107-21-1
CMF C2 H6 O2HO-CH₂-CH₂-OH

CM 5

CRN 101-68-8
CMF C15 H10 N2 O2

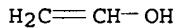
IT 1760-24-3, Sila-Ace S 320 9002-89-5D, Poly(vinyl alcohol), silane-modified
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (barrier layers; gas- and water-vapor-barrier flexible packaging films with alkali-resistant anchor-coat films)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



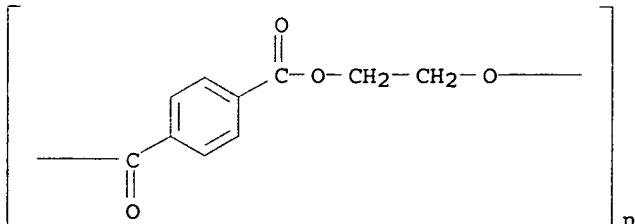
RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IT 25038-59-9, P 60, uses
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (supports; gas- and water-vapor-barrier flexible packaging films with alkali-resistant anchor-coat films)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IC ICM B32B009-00
 ICS B65D065-40
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42, 57
 IT 9002-98-6P 308278-49-1P, Coronate L-UR 1400 copolymer
 308278-53-7P, TDI-UR 1400 copolymer 338766-70-4P
 338766-72-6P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anchor-coat layers; gas- and water-vapor-barrier flexible

packaging films with alkali-resistant anchor-coat films)

IT 1760-24-3, Sila-Ace S 320 2530-83-8, Sila-Ace S 510
9002-89-5D, Poly(vinyl alcohol), silane-modified
12191-83-2, Lithium silicate (Li₂Si5O₁₁) 248251-91-4, R 2105
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(barrier layers; gas- and water-vapor-barrier flexible packaging
films with alkali-resistant anchor-coat films)

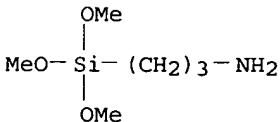
IT 9003-07-0, Pylen P 2102 25038-59-9, P 60, uses
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(supports; gas- and water-vapor-barrier flexible packaging films
with alkali-resistant anchor-coat films)

L130 ANSWER 29 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
2001:194653 Document No. 134:223819 Flexible and transparent
gas-barrier films for packaging materials. Hayashi, Kenji;
Kitahara, Satori; Sasaki, Noboru; Matsuo, Ryukichi; Kanetaka,
Takeshi (Toppan Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
JP 2001071425 A2 20010321, 12 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1999-295029 19991018. PRIORITY: JP 1999-178695
19990624; JP 1999-183524 19990629.

AB The films comprise plastic substrates coated with gas-barrier layers
containing M₂O_nSiO₂ (M = Li optionally containing alkali metals; n = 1-20)
and water-soluble polymers and/or N-containing compds. on ≥1 side.
Thus, an aqueous solution containing 90/10 Li₂O₄.5SiO₂ and PVA 117 [poly(vinyl
alc.)] was applied on Lumirror P 60 (12-μm PET film) and dried to
give a film having 1-μm gas-barrier layer with O permeability
5.68 cm³/m²-day-atm and good adhesion strength and appearance
without crack formation.

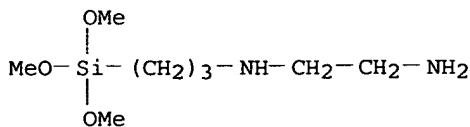
IT 13822-56-5, 3-Aminopropyltrimethoxysilane
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(Sila-Ace S 360; flexible and transparent gas-barrier films
coated with alkali silicate-containing layers for packaging
materials)

RN 13822-56-5 HCAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IT 1760-24-3, Sila Ace S 320 9002-89-5, PVA 117
9002-89-5D, Poly(vinyl alcohol), derivs. 25038-59-9
, Lumirror P 60, uses 89535-55-7, C 118
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(flexible and transparent gas-barrier films coated with alkali
silicate-containing layers for packaging materials)

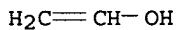
RN 1760-24-3 HCAPLUS
CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX
NAME)



RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

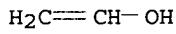
CRN 557-75-5
 CMF C2 H4 O



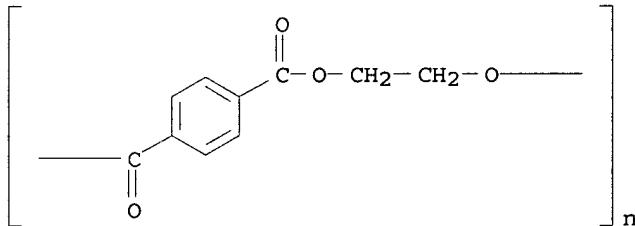
RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



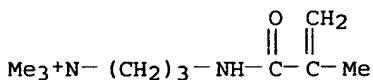
RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



RN 89535-55-7 HCAPLUS
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with ethenol (9CI) (CA INDEX NAME)

CM 1

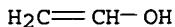
CRN 51410-72-1
 CMF C10 H21 N2 O . Cl



● Cl -

CM 2

CRN 557-75-5
CMF C2 H4 O



IC ICM B32B027-20
ICS B65D065-40; C08J007-04; C08K003-20; C08L003-02; C08L029-04;
C08L079-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42
IT 13822-56-5, 3-Aminopropyltrimethoxysilane
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(Sila-Ace S 360; flexible and transparent gas-barrier films
coated with alkali silicate-containing layers for packaging
materials)
IT 1760-24-3, Sila Ace S 320 9002-89-5, PVA 117
9002-89-5D, Poly(vinyl alcohol), derivs. 9002-98-6
9004-62-0, Hydroxyethyl cellulose 25038-59-9, Lumirror P
60, uses 89535-55-7, C 118 111214-41-6, KM 118
248251-91-4, R 2105
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(flexible and transparent gas-barrier films coated with alkali
silicate-containing layers for packaging materials)

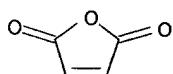
L130 ANSWER 30 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
2000:475941 Document No. 133:90767 Hydrophilization of polymer
surfaces. Lohmer, Gunther; Bielitz, Silke (CREAVIS Gesellschaft
fuer Technologie und Innovation m.b.H., Germany). Ger. Offen. DE
19900492 A1 20000713, 14 pp. (German). CODEN: GWXXBX.
APPLICATION: DE 1999-19900492 19990108.

AB Durable, hydrophilic coatings are formed on polymers, especially in
physiol. sensitive areas, by treating the polymer surface with a
functional silane of specified structure so as to form structures
and then with a (latent) hydrophilic compound. A clean, dry
polysiloxane film (Perthese) was dipped in a 1% hexane solution of
N-[3-(trimethoxysilyl)propyl]ethylenediamine, dried, dipped in a
2.5% alc. solution of poly(acrylic acid) for 20 min, dried at
100°, and extracted with H2O at room temperature to give a film with
contact angle vs. H2O 0° and unimpaired transparency.
IT 108-31-6D, Maleic anhydride, copolymers 1760-24-3,
N-[3-(Trimethoxysilyl)propyl]ethylenediamine 9002-89-5
13822-56-5, 3-(Trimethoxysilyl)propylamine
35141-30-1, N-[3-(Trimethoxysilyl)propyl]diethylenetriamine
RL: TEM (Technical or engineered material use); USES (Uses)

(hydrophilization of polymer surfaces)

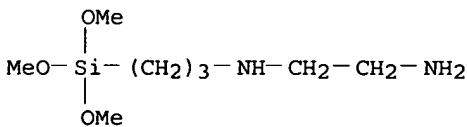
RN 108-31-6 HCAPLUS

CN 2,5-Furandione (9CI) (CA INDEX NAME)



RN 1760-24-3 HCAPLUS

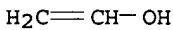
CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 9002-89-5 HCAPLUS

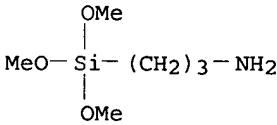
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

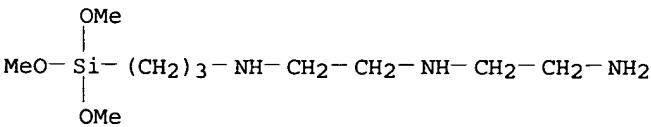
RN 13822-56-5 HCAPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



RN 35141-30-1 HCAPLUS

CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IC ICM B05D007-26

ICS B05D007-02; B05D005-00; C09D183-08

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 63

IT 75-21-8, Ethylene oxide, uses 75-56-9, Propylene oxide, uses

79-10-7D, Acrylic acid, esters, polymers 79-41-4D, Methacrylic acid, esters, polymers 108-31-6D, Maleic anhydride, copolymers 1760-24-3, N-[3-(Trimethoxysilyl)propyl]ethylenediamine 9002-89-5 9003-01-4, Poly(acrylic acid) 9003-05-8, Polyacrylamide 13822-56-5, 3-(Trimethoxysilyl)propylamine 25014-12-4, Polymethacrylamide 25087-26-7, Poly(methacrylic acid) 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 26336-38-9, Poly(vinylamine) 35141-30-1, N-[3-(Trimethoxysilyl)propyl]diethylenetriamine
RL: TEM (Technical or engineered material use); USES (Uses)
(hydrophilization of polymer surfaces)

L130 ANSWER 31 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

1999:648912 Document No. 131:287800 Overcoat agent for color filter and color filter. Yamamoto, Tetsuya; Takagi, Hiroyuki (Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11279487 A2 19991012 Heisei, 7 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1998-79692 19980326.

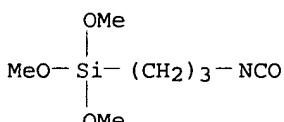
AB Title agents can form overcoat layer and comprise (1) organic compds. R1mM(OR2)n [M = metal elements, R1 = H, low alkyl, unsatd. aliphatic group, R2 = H, low. alkyl, acyl, m = 0, pos. integer, n ≥ 1 with m + n = number of metal valence], (2) silane coupling agents containing ≥1 epoxy, isocyanate, mercapto functional groups, (3) compds. which can react with compds. in (2), and (4) solvents.

IT 15396-00-6

RL: MOA (Modifier or additive use); USES (Uses)
(coupling agent; overcoat agent compns. color filter for color filter)

RN 15396-00-6 HCPLUS

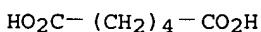
CN Silane, (3-isocyanatopropyl)trimethoxy- (9CI) (CA INDEX NAME)



IT 124-04-9, Hexanedioic acid, uses 9002-89-5, Poly(vinyl alcohol)
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(overcoat agent compns. color filter for color filter)

RN 124-04-9 HCPLUS

CN Hexanedioic acid (9CI) (CA INDEX NAME)



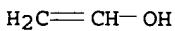
RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



IC ICM C09D183-04
 ICS C08K005-54; C08L083-04; C09D185-00; G02B005-20; G02F001-1335;
 H04N009-30

CC 42-10 (Coatings, Inks, and Related Products)
 IT 2530-83-8 4420-74-0 7727-32-4 15396-00-6 86138-01-4
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; overcoat agent compns. color filter for color
 filter)

IT 78-10-4 110-63-4, 1,4-Butanediol, uses 124-04-9,
 Hexanedioic acid, uses 141-43-5, uses 681-84-5,
 Tetramethoxysilane 1071-76-7, Tetrabutoxyzirconium 1185-55-3,
 Methyltrimethoxysilane 9002-89-5, Poly(vinyl alcohol)
 25854-16-4
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (overcoat agent compns. color filter for color filter)

L130 ANSWER 32 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1998:509224 Document No. 129:162925 Silicone/multifunctional acrylate
 barrier coatings. Merlin, Patrick J.; Futter, Dan; Wyman, John E.;
 Rangwalla, Imtiaz; Power, Gary; Branch, Karen (Dow Corning Corp.,
 USA; EG Technology Partners, Lp; UCB Films PLC). PCT Int. Appl. WO
 9831720 A1 19980723, 38 pp. DESIGNATED STATES: W: AL, AM, AT, AU,
 AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB,
 GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
 SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI,
 CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL,
 PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO
 1998-BE6 19980116. PRIORITY: GB 1997-910 19970117; GB 1997-964
 19970117.

AB The invention is a composition made by mixing a multifunctional acrylate with an amino-functional silane and an ethylenically unsatd. acid to form a reaction product, optionally dissolved in a solvent, characterized in that multifunctional acrylate has a mol. weight of from about 100 to about 3000. The composition can be coated on a substrate, then optionally exposed to moisture and treated to initiate a free radical reaction. The invention can be applied to a variety of substrates used in packaging applications to form coatings resistant to permeation by gases and aromas. The reaction mixture can further be cured by heating in the presence of moisture. The free radical reaction can be initiated by electron beam irradiation, UV radiation, gamma radiation, and/or heat and chemical free radical initiators.

IT 210900-26-8P, Ebecryl 1290-itaconic acid-Z 6020 copolymer
 210900-31-5P, Itaconic acid-SR 9020-Z 6020 copolymer
 210900-35-9P, Ebecryl 220-itaconic acid-Z 6020 copolymer
 210900-42-8P, γ -Aminopropyltriethoxysilane-itaconic acid-pentaerythritol tetraacrylate copolymer 210900-50-8P,
 A 1130-Itaconic acid-pentaerythritol tetraacrylate copolymer
 210900-56-4P, A 1170-Itaconic acid-pentaerythritol tetraacrylate copolymer 210900-62-2P 210900-71-3P
 210900-78-0P, 1,6-Hexanediol diacrylate-itaconic acid-SR 295-Z 6020 copolymer 210900-85-9P 210900-95-1P,
 Glycidyl methacrylate-itaconic acid-pentaerythritol tetraacrylate-Z 6020 copolymer 210901-02-3P, Acrylic acid-(3-aminopropyl)trimethoxysilane-1,6-hexanediol diacrylate-trimethylolpropane triacrylate copolymer 210971-67-8P,
 Ebecryl 810;Z-6020;itaconic acid copolymer 210971-68-9P,
 Ditrimethylolpropane tetraacrylate-itaconic acid-Z 6020 copolymer

210971-70-3P, Ethoxylated trimethylolpropane triacrylate-itaconic acid-Z 6020 copolymer **210971-71-4P**, Ebecryl 80-itaconic acid-Z 6020 copolymer **210971-73-6P**, Itaconic acid-tris(2-hydroxyethyl) isocyanurate triacrylate-Z 6020 copolymer **211189-90-1P**, Ebecryl 3720;itaconic acid;Z 6020 copolymer
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-silicone barrier coatings curable by radical reaction and moisture for packaging materials)

RN 210900-26-8 HCPLUS

CN Butanedioic acid, methylene-, polymer with Ebecryl 1290 and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 138636-06-3

CMF Unspecified

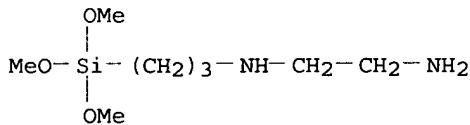
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 1760-24-3

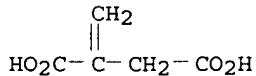
CMF C8 H22 N2 O3 Si



CM 3

CRN 97-65-4

CMF C5 H6 O4



RN 210900-31-5 HCPLUS

CN Butanedioic acid, methylene-, polymer with $\alpha, \alpha', \alpha''-1,2,3$ -propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyil)]] and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

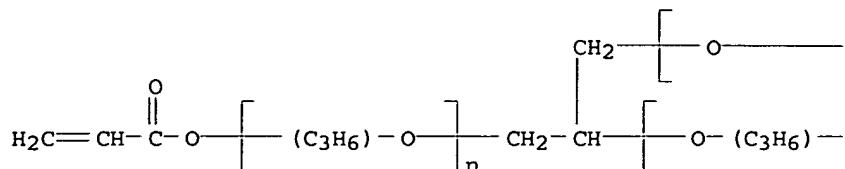
CM 1

CRN 52408-84-1

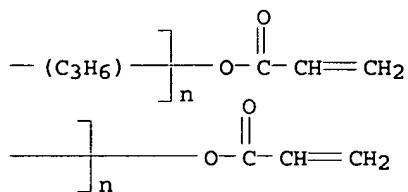
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C12 H14 O6

CCI IDS, PMS

PAGE 1-A

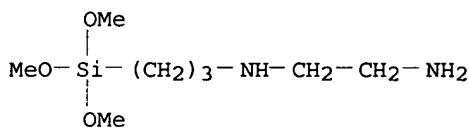


PAGE 1-B



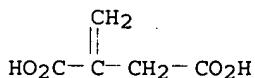
CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si



CM 3

CRN 97-65-4
CMF C5 H6 O4

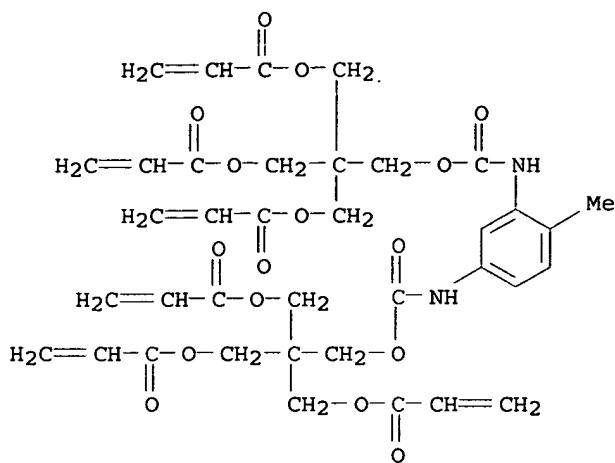


RN 210900-35-9 HCAPLUS

CN Butanedioic acid, methylene-, polymer with (4-methyl-1,3-phenylene)bis[iminocarbonyloxy[2,2-bis[[1-oxo-2-propenyl]oxy]methyl]-3,1-propanediyl]] di-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

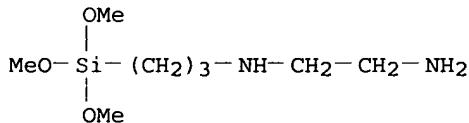
CRN 50843-44-2
CMF C37 H42 N2 016



CM 2

CRN 1760-24-3

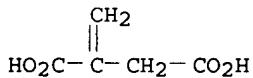
CMF C8 H22 N2 O3 Si



CM 3

CRN 97-65-4

CMF C5 H6 O4



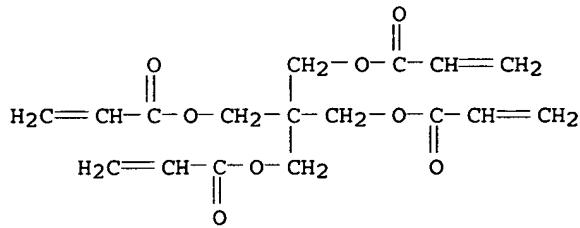
RN 210900-42-8 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

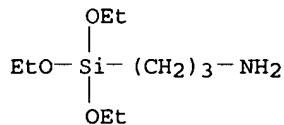
CRN 4986-89-4

CMF C17 H20 O8



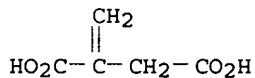
CM 2

CRN 919-30-2
CMF C9 H23 N O3 Si



CM 3

CRN 97-65-4
CMF C5 H6 O4

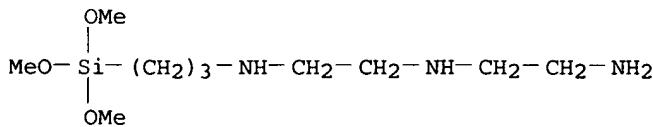


RN 210900-50-8 HCAPLUS

CN Butanedioic acid, methylene-, polymer with N-(2-aminoethyl)-N'-(3-(trimethoxysilyl)propyl)-1,2-ethanediamine and 2,2-bis[[{(1-oxo-2-propenyl)oxy}methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

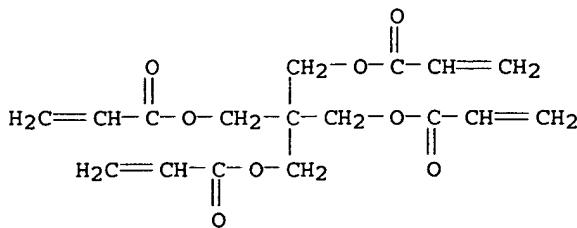
CM 1

CRN 35141-30-1
CMF C10 H27 N3 O3 Si

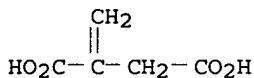


CM 2

CRN 4986-89-4
CMF C17 H20 08

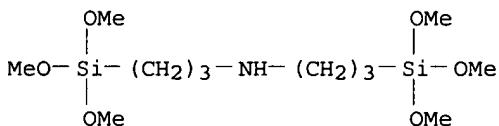


CM 3

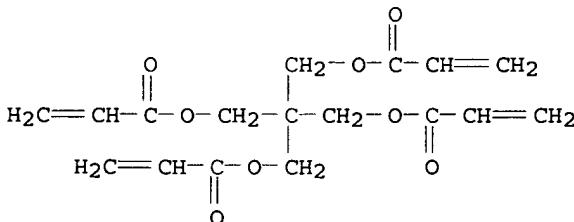
CRN 97-65-4
CMF C5 H6 O4

RN 210900-56-4 HCPLUS
 CN Butanedioic acid, methylene-, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and
 3-(trimethoxysilyl)-N-[3-(trimethoxysilyl)propyl]-1-propanamine
 (9CI) (CA INDEX NAME)

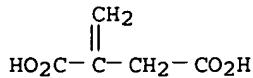
CM 1

CRN 82985-35-1
CMF C12 H31 N O6 Si2

CM 2

CRN 4986-89-4
CMF C17 H20 O8

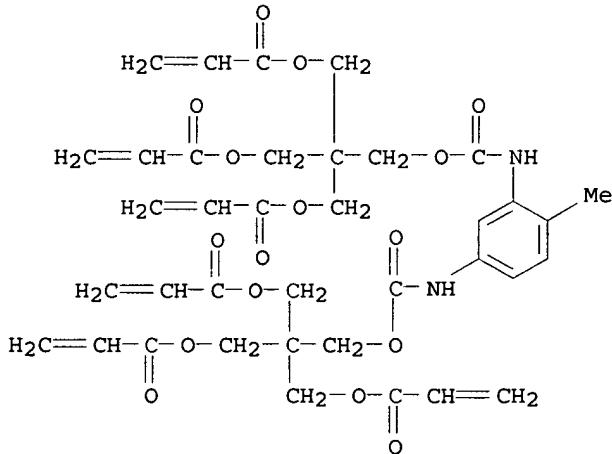
CM 3

CRN 97-65-4
CMF C5 H6 O4

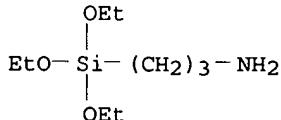
RN 210900-62-2 HCPLUS

CN Butanedioic acid, methylene-, polymer with (4-methyl-1,3-phenylene)bis[iminocarbonyloxy[2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-3,1-propanediyl] di-2-propenoate and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 50843-44-2
CMF C37 H42 N2 O16

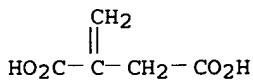
CM 2

CRN 919-30-2
CMF C9 H23 N O3 Si

CM 3

CRN 97-65-4

CMF C5 H6 O4



RN 210900-71-3 HCPLUS

CN Butanedioic acid, methylene-, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 3-(triethoxysilyl)-1-propanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

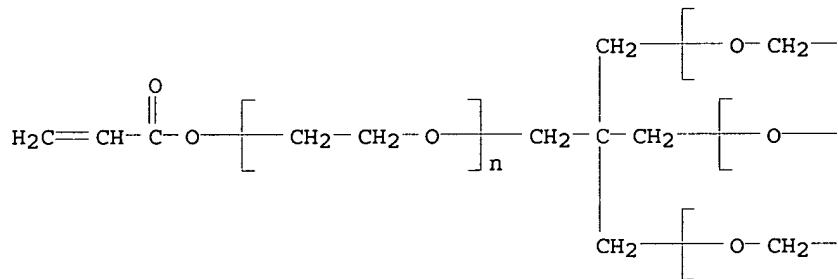
CM 1

CRN 51728-26-8

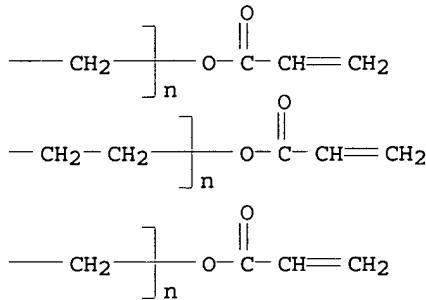
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C17 H20 O8

CCI PMS

PAGE 1-A



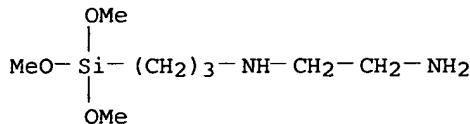
PAGE 1-B



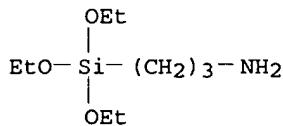
CM 2

CRN 1760-24-3

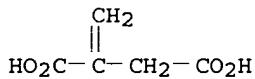
CMF C8 H22 N2 O3 Si



CM 3

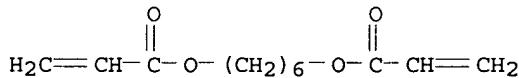
CRN 919-30-2
CMF C9 H23 N O3 Si

CM 4

CRN 97-65-4
CMF C5 H6 O4

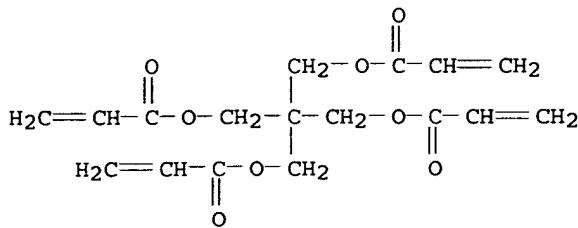
RN 210900-78-0 HCPLUS
 CN Butanedioic acid, methylene-, polymer with 2,2-bis{[(1-oxo-2-propenyl)oxy]methyl}-1,3-propanediyl di-2-propenoate, 1,6-hexanediyl di-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 13048-33-4
CMF C12 H18 O4

CM 2

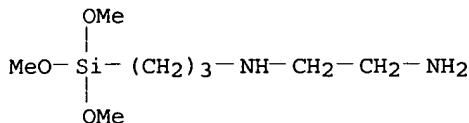
CRN 4986-89-4
CMF C17 H20 O8



CM 3

CRN 1760-24-3

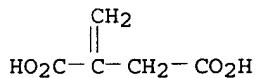
CMF C8 H22 N2 O3 Si



CM 4

CRN 97-65-4

CMF C5 H6 O4



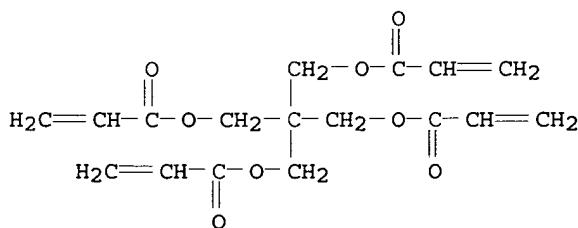
RN 210900-85-9 HCPLUS

CN Butanedioic acid, methylene-, polymer with 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 3-(triethoxysilyl)-1-propanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

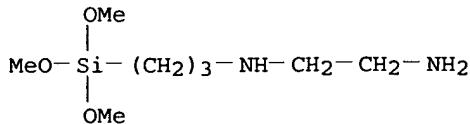
CRN 4986-89-4

CMF C17 H20 O8



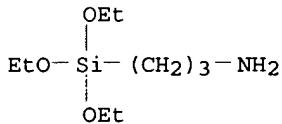
CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si



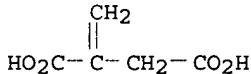
CM 3

CRN 919-30-2
CMF C9 H23 N 03 Si



CM 4

CRN 97-65-4
CMF C5 H6 O4

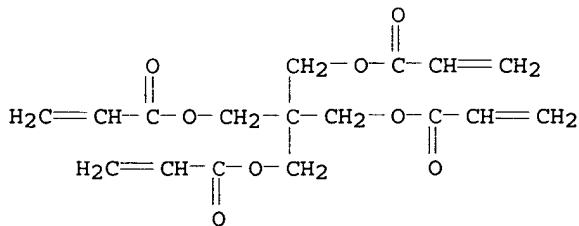


RN 210900-95-1 HCAPLUS

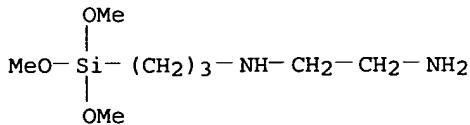
CN Butanedioic acid, methylene-, polymer with 2,2-bis[[1-oxo-2-propenyl]oxy]methyl]-1,3-propanediyl di-2-propenoate, oxiranymethyl 2-methyl-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

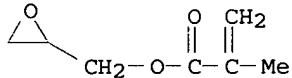
CRN 4986-89-4
CMF C17 H20 08



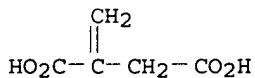
CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si

CM 3

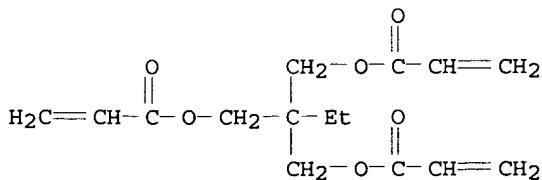
CRN 106-91-2
CMF C7 H10 O3

CM 4

CRN 97-65-4
CMF C5 H6 O4

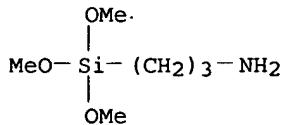
RN 210901-02-3 HCPLUS
 CN 2-Propenoic acid, polymer with 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 1,6-hexanediyl di-2-propenoate and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5
CMF C15 H20 O6

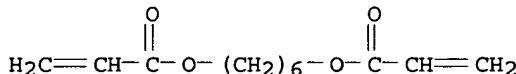
CM 2

CRN 13822-56-5
 CMF C6 H17 N O3 Si



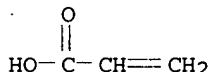
CM 3

CRN 13048-33-4
 CMF C12 H18 O4



CM 4

CRN 79-10-7
 CMF C3 H4 O2



RN 210971-67-8 HCPLUS
 CN Butanedioic acid, methylene-, polymer with Ebecryl 810 and
 N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX
 NAME)

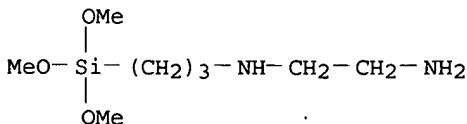
CM 1

CRN 79586-49-5
 CMF Unspecified
 CCI PMS, MAN

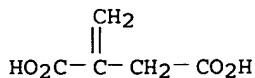
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CM 2

CRN 1760-24-3
 CMF C8 H22 N2 O3 Si

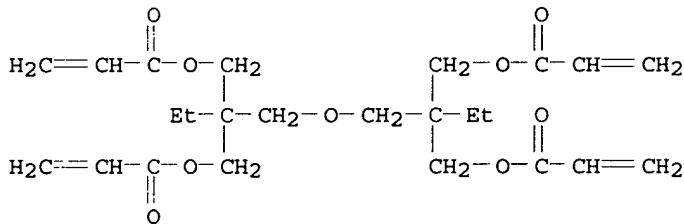


CM 3

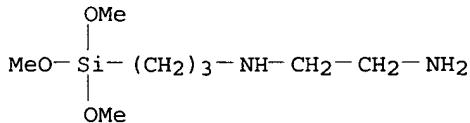
CRN 97-65-4
CMF C5 H6 O4

RN 210971-68-9 HCAPLUS
 CN Butanedioic acid, methylene-, polymer with 2-[[2,2-bis[[((1-oxo-2-propenyl)oxy)methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl di-2-propenoate and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

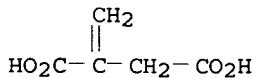
CM 1

CRN 94108-97-1
CMF C24 H34 O9

CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si

CM 3

CRN 97-65-4
CMF C5 H6 O4

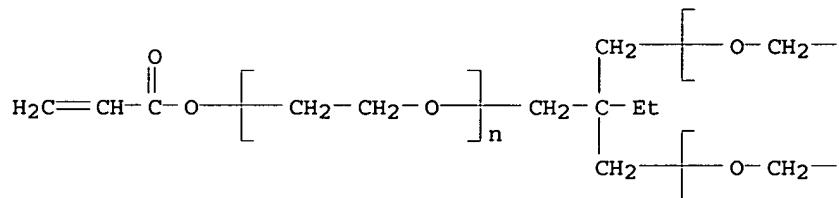
RN 210971-70-3 HCAPLUS
 CN Butanedioic acid, methylene-, polymer with α -hydro- ω -[(1-

oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with
 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and
 N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX
 NAME)

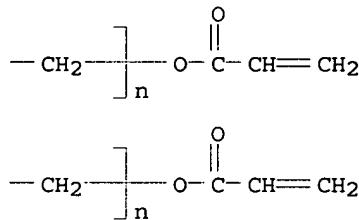
CM 1

CRN 28961-43-5
CMF (C₂ H₄ O)_n (C₂ H₄ O)_n (C₂ H₄ O)_n C₁₅ H₂₀ O₆
CCI PMS

PAGE 1-A

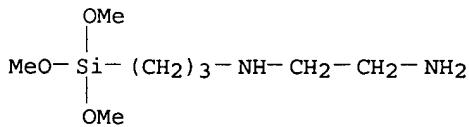


PAGE 1-B



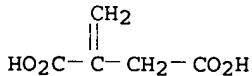
CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si



CM 3

CRN 97-65-4
CMF C5 H6 O4



RN 210971-71-4 HCPLUS
 CN Butanedioic acid, methylene-, polymer with Ebecryl 80 and
 N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX
 NAME)

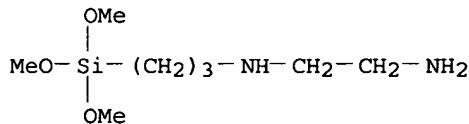
CM 1

CRN 143748-77-0
 CMF Unspecified
 CCI PMS, MAN

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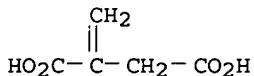
CM 2

CRN 1760-24-3
 CMF C8 H22 N2 O3 Si



CM 3

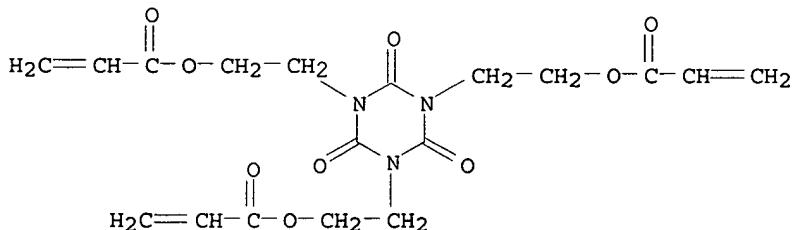
CRN 97-65-4
 CMF C5 H6 O4



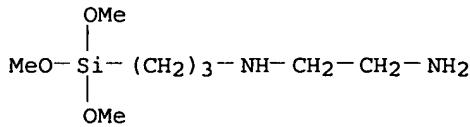
RN 210971-73-6 HCPLUS
 CN Butanedioic acid, methylene-, polymer with N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine and (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

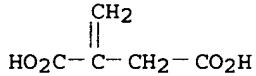
CRN 40220-08-4
 CMF C18 H21 N3 O9



CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si

CM 3

CRN 97-65-4
CMF C5 H6 O4

RN 211189-90-1 HCAPLUS

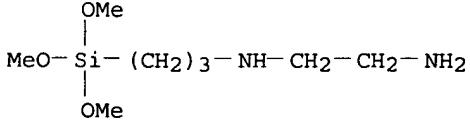
CN Butanedioic acid, methylene-, polymer with Ebecryl 3720 and
N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX
NAME)

CM 1

CRN 211188-62-4
CMF Unspecified
CCI MAN

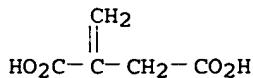
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CM 2

CRN 1760-24-3
CMF C8 H22 N2 O3 Si

CM 3

CRN 97-65-4
CMF C5 H6 O4

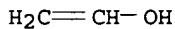


IT 9002-89-5, Polyvinyl alcohol 25038-59-9, PET polymer, miscellaneous 25067-34-9, Ethylene-vinyl alcohol copolymer 25718-70-1
 RL: MSC (Miscellaneous)
 (substrate; acrylic-silicone barrier coatings curable by radical reaction and moisture for packaging materials)

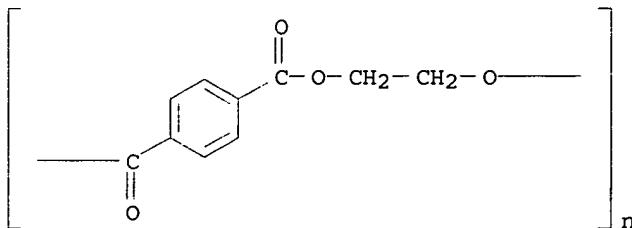
RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



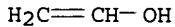
RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



RN 25067-34-9 HCAPLUS
 CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



CM 2

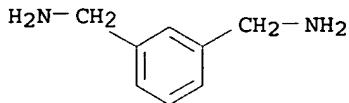
CRN 74-85-1
 CMF C2 H4



RN 25718-70-1 HCPLUS
 CN Hexanedioic acid, polymer with 1,3-benzenedimethanamine (9CI) (CA
 INDEX NAME)

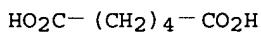
CM 1

CRN 1477-55-0
 CMF C8 H12 N2



CM 2

CRN 124-04-9
 CMF C6 H10 O4



IC ICM C08F230-08
 ICS C08F290-14; C08F283-12; C09D004-00; C09D004-06; B65D065-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 38
 IT 210900-26-8P, Ebecryl 1290-itaconic acid-Z 6020 copolymer
 210900-31-5P, Itaconic acid-SR 9020-Z 6020 copolymer
 210900-35-9P, Ebecryl 220-itaconic acid-Z 6020 copolymer
 210900-42-8P, γ -Aminopropyltriethoxysilane-itaconic
 acid-pentaerythritol tetraacrylate copolymer 210900-50-8P,
 A 1130-Itaconic acid-pentaerythritol tetraacrylate copolymer
 210900-56-4P, A 1170-Itaconic acid-pentaerythritol
 tetraacrylate copolymer 210900-62-2P 210900-71-3P
 210900-78-0P, 1,6-Hexanediol diacrylate-itaconic acid-SR
 295-Z 6020 copolymer 210900-85-9P 210900-95-1P,
 Glycidyl methacrylate-itaconic acid-pentaerythritol tetraacrylate-Z
 6020 copolymer 210901-02-3P, Acrylic acid-(3-
 aminopropyl)trimethoxysilane-1,6-hexanediol diacrylate-
 trimethylolpropane triacrylate copolymer 210971-67-8P,
 Ebecryl 810;Z-6020;itaconic acid copolymer 210971-68-9P,
 D trimethylolpropane tetraacrylate-itaconic acid-Z 6020 copolymer
 210971-70-3P, Ethoxylated trimethylolpropane
 triacrylate-itaconic acid-Z 6020 copolymer 210971-71-4P,
 Ebecryl 80-itaconic acid-Z 6020 copolymer 210971-73-6P,
 Itaconic acid-tris(2-hydroxyethyl) isocyanurate triacrylate-Z 6020
 copolymer 211189-90-1P, Ebecryl 3720;itaconic acid;Z 6020
 copolymer
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic-silicone barrier coatings curable by radical reaction
 and moisture for packaging materials)

IT 9002-85-1, Polyvinylidene chloride 9002-86-2, Polyvinyl chloride
 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene
 9003-53-6, Polystyrene 9010-77-9, Acrylic acid-ethylene copolymer
 9020-32-0, Polyethylene naphthalate 9020-73-9 24937-78-8, EVA
 25014-41-9, Polyacrylonitrile 25038-59-9, PET polymer,
 miscellaneous 25067-34-9, Ethylene-vinyl alcohol copolymer

25718-70-1 25805-74-7, MXD6

RL: MSC (Miscellaneous)

(substrate; acrylic-silicone barrier coatings curable by radical reaction and moisture for packaging materials)

L130 ANSWER 33 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

1998:509223 Document No. 129:150150 Polyamine/unsaturated organic acid composition for barrier coating. Wyman, John E.; Rangwalla, Imtiaz; Merlin, Patrick J.; Futter, Dan; Power, Gary; Branch, Karen (EG Technology Partners, Lp, USA; Dow Corning Corp.; UCB Films PLC). PCT Int. Appl. WO 9831719 A1 19980723, 21 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2.

APPLICATION: WO 1998-BE7 19980116. PRIORITY: GB 1997-988 19970117; GB 1997-905 19970117.

AB The present invention teaches a composition which provides gas, flavor, and aroma barrier to substrates, where the composition is formed by mixing an ethylenically unsatd. acid and a polyamine, wherein said polyamine optionally has a crosslinker reacted therein, and wherein said polyamine has four or more A, B or C units, where A is an R2N(R1)2 unit, B is an R1N(R2)2 unit, and C is an (R2)3N unit, where R1 is independently selected from hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, and alkylaryl, and R2 is independently selected from the group consisting of: linear or branched alkylene groups or substituted alkylene groups having from 1 to 18 carbon atoms, and arylene groups or substituted arylene groups having from 6 to 18 carbon atoms. The composition is coated on a substrate then optionally treated to initiate a free radical reaction. The invention can be applied as a coating to a variety of substrates used in packaging applications. Thus, heating a mixture containing PEI 7.398, iso-PrOH 25, and Z-6040 (γ -trimethoxysilylpropyl glycidyl ether) crosslinker 0.624 3 h at 60°, adding 21.978 g itaconic acid, 10 g iso-PrOH, 35 g water, and 0.1% (based on solids) Eccoterg EO-100 (I), diluting to 25% solids with 50% aqueous iso-PrOH containing 0.1% I, coating corona-treated oriented polypropylene film with the resulting solution, drying 10 min at 100-110°, and irradiating the dried film with 10 Mrad dose of 175 KV electrons gave a cured coating.

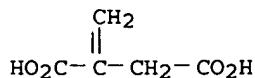
IT 97-65-4DP, Itaconic acid, reaction products with crosslinked polyamines 110-16-7DP, Maleic acid, reaction products with polyamines 110-17-8DP, Fumaric acid, reaction products with itaconic acid and polyethylenimine 498-23-7DP, Citraconic acid, reaction products with polyamines 498-24-8DP, Mesaconic acid, reaction products with polyamines 24801-88-5DP, γ -Isocyanatopropyltriethoxysilane, reaction products with polyamines and unsatd. acids 26248-95-3DP, Monomethyl itaconate, reaction products with polyamines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-unsatd. organic acid composition for manufacture of barrier coatings on packaging materials)

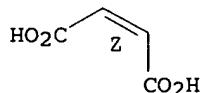
RN 97-65-4 HCPLUS

CN Butanedioic acid, methylene- (9CI) (CA INDEX NAME)



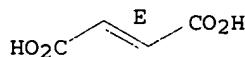
RN 110-16-7 HCAPLUS
 CN 2-Butenedioic acid (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



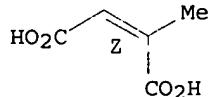
RN 110-17-8 HCAPLUS
 CN 2-Butenedioic acid (2E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



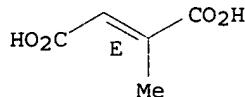
RN 498-23-7 HCAPLUS
 CN 2-Butenedioic acid, 2-methyl-, (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

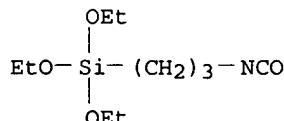


RN 498-24-8 HCAPLUS
 CN 2-Butenedioic acid, 2-methyl-, (2E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

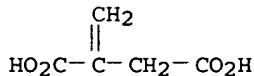


RN 24801-88-5 HCAPLUS
 CN Silane, triethoxy(3-isocyanatopropyl)- (9CI) (CA INDEX NAME)



RN 26248-95-3 HCAPLUS
 CN Butanedioic acid, methylene-, monomethyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 97-65-4
CMF C5 H6 O4

CM 2

CRN 67-56-1
CMF C H4 OH₃C-OH

IT 9002-89-5, Polyvinyl alcohol 25038-59-9, PET polymer, miscellaneous 25067-34-9, Ethylene-vinyl alcohol copolymer 25718-70-1
 RL: MSC (Miscellaneous)
 (substrate; polyamine-unsatd. organic acid composition for manufacture of barrier coatings on packaging materials)

RN 9002-89-5 HCAPLUS

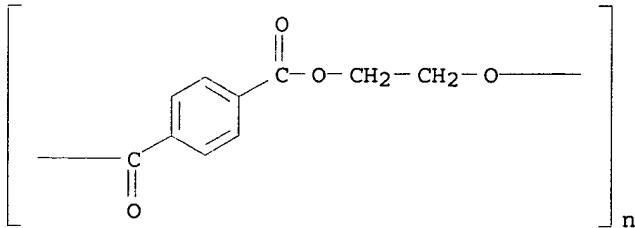
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 OH₂C=CH-OH

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



RN 25067-34-9 HCAPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

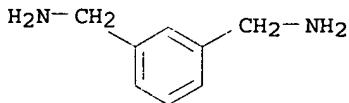
CMF C2 H4 O



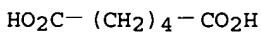
CM 2

CRN 74-85-1
CMF C2 H4RN 25718-70-1 HCPLUS
CN Hexanedioic acid, polymer with 1,3-benzenedimethanamine (9CI) (CA
INDEX NAME)

CM 1

CRN 1477-55-0
CMF C8 H12 N2

CM 2

CRN 124-04-9
CMF C6 H10 O4

IC ICM C08F220-00
 ICS C08F290-14; C09D004-06; C09D004-00; B65D065-00
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 78-08-0DP, Vinyltrioxysilane, reaction products with polyamines
 and unsatd. acids 79-10-7DP, 2-Propenoic acid, reaction products
 with polyamines, uses 79-41-4DP, reaction products with polyamines
 97-65-4DP, Itaconic acid, reaction products with crosslinked
 polyamines 106-91-2DP, reaction products with polyamines and
 unsatd. acids 110-16-7DP, Maleic acid, reaction products
 with polyamines 110-17-8DP, Fumaric acid, reaction
 products with itaconic acid and polyethylenimine 110-44-1DP,
 Sorbic acid, reaction products with polyamines 498-23-7DP,
 Citraconic acid, reaction products with polyamines
 498-24-8DP, Mesaconic acid, reaction products with
 polyamines 621-82-9DP, Cinnamic acid, reaction products with
 polyamines 1184-84-5DP, Vinylsulfonic acid, reaction products with
 polyamines 1746-03-8DP, Vinylphosphonic acid, reaction products
 with polyamines 2530-83-8DP, reaction products with polyamines and
 unsatd. acids 2530-85-0DP, reaction products with polyamines and
 unsatd. acids 2768-02-7DP, reaction products with polyamines and

unsatd. acids 4369-14-6DP, γ -Acryloyloxypropyltrimethoxysilane, reaction products with polyamines and unsatd. acids 4986-89-4DP, Pentaerythritol tetraacrylate, reaction products with polyamines and unsatd. acids 5314-55-6DP, Ethyltrimethoxysilane, reaction products with polyamines and unsatd. acids 9002-98-6DP, PEI, reaction products with crosslinkers and unsatd acids 16881-77-9DP, Methyldimethoxysilane, reaction products with polyamines and unsatd. acids 24801-88-5DP, γ -Isocyanatopropyltriethoxysilane, reaction products with polyamines and unsatd. acids 25512-39-4DP, Chloropropyltrimethoxysilane, reaction products with polyamines and unsatd. acids 26248-95-3DP, Monomethyl itaconate, reaction products with polyamines 29656-55-1DP, Chloropropyltriethoxysilane, reaction products with polyamines and unsatd. acids 65799-47-5DP, Dimethoxyglycidyloxypropylmethyldimethoxysilane, reaction products with polyamines and unsatd. acids 107853-35-0DP, SZ-6050, reaction products with itaconic acid 210891-76-2DP, Vinyltris(2-epoxycyclohexyl)silane, reaction products with polyamines and unsatd. acids 210891-78-4DP, Chloropropylethyldimethoxysilane, reaction products with polyamines and unsatd. acids

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamine-unsatd. organic acid composition for manufacture of barrier coatings on packaging materials)

IT 9002-85-1, Polyvinylidene chloride 9002-86-2, PVC 9002-88-4
 9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene
 9003-53-6, Polystyrene 9010-77-9, Acrylic acid-ethylene copolymer
 9020-32-0, Polyethylene naphthalate 9020-73-9 24937-78-8, EVA
 25014-41-9, Polyacrylonitrile 25038-59-9, PET polymer,
 miscellaneous 25067-34-9, Ethylene-vinyl alcohol copolymer
 25718-70-1 25805-74-7, MXD6

RL: MSC (Miscellaneous)

(substrate; polyamine-unsatd. organic acid composition for manufacture of barrier coatings on packaging materials)

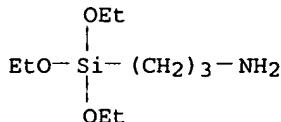
L130 ANSWER 34 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 1998:406013 Document No. 129:96320 Process for improving adhesion of electroconductive metal oxide layers to polymeric substrates and articles produced thereby. Knox, Carol L. (PPG Industries, Inc., USA). PCT Int. Appl. WO 9825995 A1 19980618, 36 pp. DESIGNATED STATES: W: BR, CA, CN, JP, KR, MX, SG; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US21549 19971121. PRIORITY: US 1996-766549 19961211.

AB The method includes the steps of coating the polymeric substrate such as a plastic lens with a composition containing at least one polymer-forming organosilane, which when cured forms a non-tintable coating, and depositing an electroconductive metal oxide on the cured silane coating to form an adherent layer, e.g., a film or coating, thereon. Also described are electrooptical articles such as electrochromic articles, which utilize such articles.

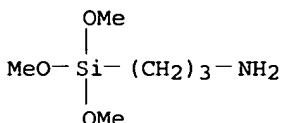
IT 919-30-2, γ -Aminopropyltriethoxysilane
 13822-56-5
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
 (improving the adhesion of electroconductive metal oxide layers to polymeric substrates with an organosilane treatment)

RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

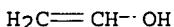


RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

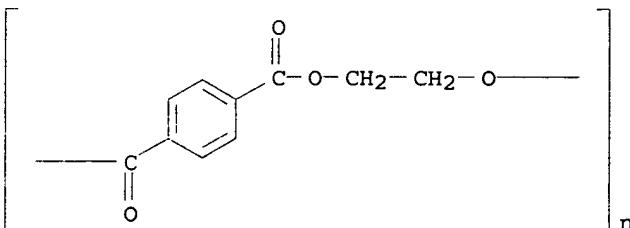


IT 9002-89-5, Polyvinyl alcohol 25038-59-9, PET
 polymer, uses
 RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PROC (Process); USES (Uses)
 (improving the adhesion of electroconductive metal oxide layers
 to polymeric substrates with an organosilane treatment)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C08J007-04
 CC 38-2 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42, 73
 IT 78-07-9, Ethyltriethoxysilane 78-10-4 78-62-6 681-84-5,
 Tetramethoxysilane 682-01-9, Tetrapropoxysilane 919-30-2
 , γ -Aminopropyltriethoxysilane 1185-55-3 2031-67-6
 2530-83-8 2530-85-0 4253-34-3, Methyltriacetoxy silane
 4420-74-0, γ -Mercaptopropyltrimethoxysilane 4766-57-8,
 Tetrabutoxysilane 5314-55-6, Ethyltrimethoxysilane 5581-66-8,
 Methyltripropoxysilane 5581-68-0, Methyltributoxysilane

5926-26-1, Chloromethyltrimethoxysilane 13501-76-3,
 γ -Chloropropyldiethoxymethyldilane 13822-56-5
 15267-95-5, Chloromethyltriethoxysilane 17963-04-1,
 γ -Glycidyloxypropyltrimethoxysilane 17980-64-2
 18171-19-2, γ -Chloropropylmethyldimethoxysilane 20526-39-0,
 β -Glycidyloxyethyltrimethoxysilane 23794-26-5,
 α -Glycidyloxypropyltrimethoxysilane 56325-91-8,
 β -Glycidyloxyethyltriethoxysilane 56899-99-1,
 Glycidyloxydimethoxymethylsilane 65799-47-5, γ -
 Glycidyloxypropyltrimethoxysilane 70187-33-6,
 β -Glycidyloxypropyltrimethoxysilane 88189-97-3,
 α -Glycidyloxypropyltriethoxysilane 209548-56-1,
 α -Glycidyloxyethyltriethoxysilane 209548-57-2,
 α -Glycidyloxyethyltriethoxysilane 209548-58-3,
 β -Glycidyloxypropyltriethoxysilane

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

(improving the adhesion of electroconductive metal oxide layers to polymeric substrates with an organosilane treatment)

IT 9002-85-1, Polyvinylidene chloride 9002-86-2, PVC
 9002-89-5, Polyvinyl alcohol 9003-20-7, PVAC 9003-53-6,
 Polystyrene 9003-54-7, Acrylonitrile-styrene copolymer
 9004-35-7, Cellulose acetate 9004-36-8, Cellulose acetate butyrate
 9004-39-1, Cellulose acetate propionate 9011-14-7, Polymethyl
 methacrylate 9012-09-3, Cellulose triacetate 25014-31-7,
 Poly(α -methylstyrene) 25034-86-0, Methyl
 methacrylate-styrene copolymer 25038-59-9, PET polymer,
 uses 25721-76-0, Poly(ethylene glycol dimethacrylate)
 41637-38-1, Polyethylene glycol bisphenol A ether dimethacrylate
 RL: DEV (Device component use); PEP (Physical, engineering or
 chemical process); PROC (Process); USES (Uses)

(improving the adhesion of electroconductive metal oxide layers to polymeric substrates with an organosilane treatment)

L130 ANSWER 35 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

1998:388981 Document No. 129:82616 Packaging materials and storing of
 medical goods by using the same. Miyake, Ryuta; Maruyama, Toshihide
 (Daicel Chemical Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho
 JP 10156996 A2 19980616 Heisei, 14 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1996-323145 19961203.

AB The packaging materials are composed of composite films containing (A) substrate films, (B) transparent inorg. compound layers on A, and (C) barrier resin layers on B. Anchor coat layers (D) may be formed between A and B. Preferably, A is composed of polypropylene, poly(alkylene terephthalates), or polyamides, D is composed of Cl-containing resins or polyisocyanates and Cl-containing resins and/or saturated polyesters, B is composed of metal oxides, and C is composed of silane coupling agents, vinylidene chloride copolymers, or ethylene-vinyl alc. copolymers. D may show modulus of elasticity 0.1 + 101 - 1 + 103 N/mm². The packagings may show the thickness of A 10-30 μ m, the thickness of the coatings composed of D, B, and C 0.5-5 μ m, and O permeability at 25° \leq 1 mL/m²-24-h and moisture permeability at 40° and 90% RH \leq 3 g/m²-24 h. Medical goods are sealed in the composite films. Thus, a biaxially drawn PET film was coated with an anchor coat comprising Denka 1000C (vinyl chloride-vinyl acetate-maleic anhydride copolymer) 100, Coronate L (TDI-trimethylolpropane adduct) 100, and Vylon 30SS (saturated polyester) 15 parts, electrodeposition-coated with SiO₂, coated with Saran F 216 solution containing 1.0 parts (per 100 parts resin) TSL 8350, and dried to give a composite film, which was further laminated with Cenessy C 1530-40 (undrawn polypropylene heat-sealable film) by use of a polyurethane adhesive

to give a product.

IT 9005-09-8, Denka Vinyl 1000C
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (Denka 1000C, anchor coat containing; O- and moisture-barrier laminated film packaging materials for storing medical goods)

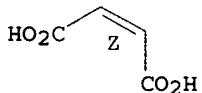
RN 9005-09-8 HCPLUS

CN 2-Butenedioic acid (2Z)-, polymer with chloroethene and ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7
 CMF C4 H4 O4

Double bond geometry as shown.



CM 2

CRN 108-05-4
 CMF C4 H6 O2AcO-CH=CH₂

CM 3

CRN 75-01-4
 CMF C2 H3 ClH₂C=CH-Cl

IT 25067-34-9, Soarnol 30L
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (coating; O- and moisture-barrier laminated film packaging materials for storing medical goods)

RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

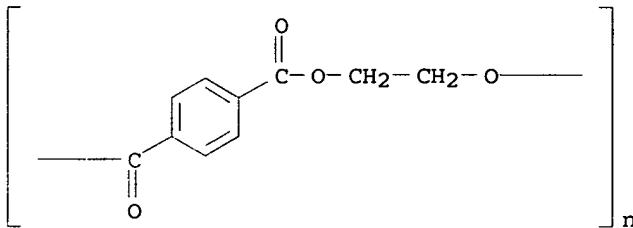
CRN 557-75-5
 CMF C2 H4 OH₂C=CH-OH

CM 2

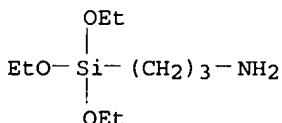
CRN 74-85-1
CMF C2 H4

$\text{H}_2\text{C}=\text{CH}_2$

IT 25038-59-9, Poly(ethylene terephthalate), uses
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(substrate; O- and moisture-barrier laminated film packaging
materials for storing medical goods)
RN 25038-59-9 HCAPLUS
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
INDEX NAME)



IT 919-30-2, TSL 8331
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical
or engineered material use); USES (Uses)
(vinylidene chloride-type polymer coating containing; O- and
moisture-barrier laminated film packaging materials for storing
medical goods)
RN 919-30-2 HCAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IC ICM B32B009-00
ICS A45D033-00; B32B027-00; B32B027-28; B32B027-30
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42, 63
IT 9005-09-8, Denka Vinyl 1000C
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical
or engineered material use); USES (Uses)
(Denka 1000C, anchor coat containing; O- and moisture-barrier
laminated film packaging materials for storing medical goods)
IT 25067-34-9, Soarnol 30L 25249-59-6, Saran F 216
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical
or engineered material use); USES (Uses)
(coating; O- and moisture-barrier laminated film packaging
materials for storing medical goods)
IT 25038-59-9, Poly(ethylene terephthalate), uses
RL: PRP (Properties); TEM (Technical or engineered material use);

USES (Uses)

(substrate; O- and moisture-barrier laminated film packaging materials for storing medical goods)

IT 78-08-0, TSL 8311 919-30-2, TSL 8331 2530-83-8
4420-74-0, TSL 8380

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(vinylidene chloride-type polymer coating containing; O- and moisture-barrier laminated film packaging materials for storing medical goods)

L130 ANSWER 36 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN

1998:8206 Document No. 128:91858 Anticorrosion coating treatment of metal surfaces using alkaline silicate and organosilane baths.
Petrole, Anthony P.; Rivera, Jose B. (Bulk Chemicals, Inc., USA).
U.S. US 5700523 A 19971223, 6 pp. (English). CODEN: USXXAM.

APPLICATION: US 1996-657352 19960603.

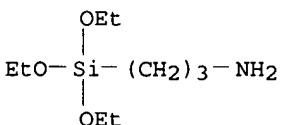
AB Corrosion resistance and paint adhesion are improved by: (a) coating a cleaned metal surface in aqueous silicate bath at pH ≥8, using the bath containing Na and/or K silicates at 0.1-100 g/L, optionally followed by aqueous rinsing stage; (b) contacting the silicate-coated metal surface with aqueous bath based on aminopropylsilane at 0.1-100 g/L; and (c) finishing with a chromate-free primer in the bath containing polymer product with OH- and carboxylic functional groups reacted with Ti, Zr, and/or Hf compds. Galvanized steel specimens passed the 400-h test with aqueous 5% NaCl spray after: (a) dip cleaning for .apprx.60 s at 150° F in aqueous alkaline solution containing K silicate at 2 g/L, followed by 20-s rinse in tap water at .apprx.110° F; (b) immediate dip treatment in aqueous solution containing γ-aminopropyltriethoxysilane at 1.0 g/L; (c) primer treatment for 30 s at .apprx.90° F in aqueous bath containing poly(vinyl alc.) 0.73, polyacrylic acid 1.14, fluorinated surfactant 0.02, iso-PrOH 0.08, basic NH4-Zr carbonate 2.20, and fluoride 0.01 g/L; and (d) coating with a single layer of water-based paint.

IT 919-30-2, γ-Aminopropyltriethoxysilane
9002-89-5, Poly(vinyl alcohol) 32535-84-5,
Ammonium zirconium carbonate hydroxide

RL: MOA (Modifier or additive use); USES (Uses)
(primer bath with, in painting; anticorrosion primer coating of metals using alkaline silicate and organosilane baths)

RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

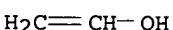


RN 9002-89-5 HCAPLUS

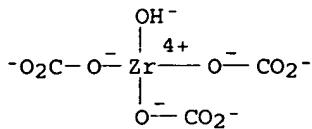
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



RN 32535-84-5 HCPLUS
 CN Zirconate(3-), tris[carbonato(2-)-κO]hydroxy-, triammonium,
 (T-4)- (9CI) (CA INDEX NAME)



●3 NH₄⁺

IC ICM C23C022-34
 INCL 427397800
 CC 56-6 (Nonferrous Metals and Alloys)
 Section cross-reference(s): 42
 IT 67-63-0, Isopropanol, uses 919-30-2, γ-
 Aminopropyltriethoxysilane 9002-89-5, Poly(vinyl alcohol)
 9003-01-4, Polyacrylic acid 32535-84-5, Ammonium zirconium
 carbonate hydroxide
 RL: MOA (Modifier or additive use); USES (Uses)
 (primer bath with, in painting; anticorrosion primer coating of
 metals using alkaline silicate and organosilane baths)

L130 ANSWER 37 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1997:655420 Document No. 127:294666 Process for producing a coated
 film continuously. Yamamoto, Tetsuya; Naka, Akio; Nishio, Yukiko
 (Nippon Shokubai Co., Ltd., Japan; Nippon Catalytic Chem. Ind.).
 Eur. Pat. Appl. EP 798054 A2 19971001, 15 pp. DESIGNATED STATES: R:
 BE, DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP
 1997-103281 19970227. PRIORITY: JP 1996-41902 19960228.

AB A process for producing a coated film continuously comprises:
 running a substrate film, and extruding a coating composition having a
 viscosity of 0.1-100 cP at 20°C through a slit of a die onto
 a surface of the substrate film to produce a coating layer having a
 thickness of 0.1 to 20 μm over the substrate film. It is
 possible to produce a coated film continuously at high speed, using
 a coating material having a viscosity as low as water or a coating
 material with a problem of deterioration due to the exposure to the
 air, thereby producing a coating layer over the substrate film to a
 uniform thickness. Polyvinylidene chloride (Saran L-502) was coated
 on a PET film.

IT 25067-34-9, Ethylene-vinyl alcohol copolymer
 RL: PEP (Physical, engineering or chemical process); TEM (Technical
 or engineered material use); PROC (Process); USES (Uses)
 (Soanol 30L; process for producing a coated film continuously)

RN 25067-34-9 HCPLUS
 CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

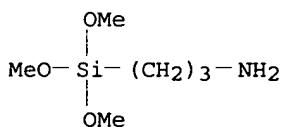
H₂C≡CH—OH

CM 2

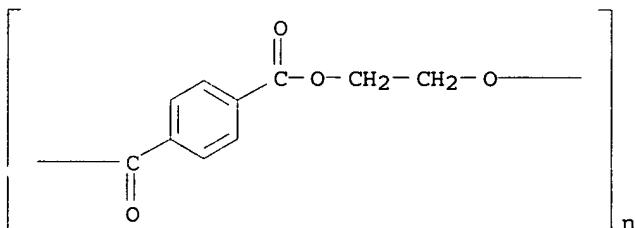
CRN 74-85-1
CMF C2 H4

H₂C≡CH₂

IT 13822-56-5DP, γ -Aminopropyltrimethoxysilane, reaction products with epoxy resins and tetramethoxysilane
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(process for producing a coated film continuously)
RN 13822-56-5 HCAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IT 25038-59-9, PET polymer, miscellaneous
RL: MSC (Miscellaneous)
(process for producing a coated film continuously)
RN 25038-59-9 HCAPLUS
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IT 9002-89-5, Polyvinyl alcohol
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(process for producing a coated film continuously)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

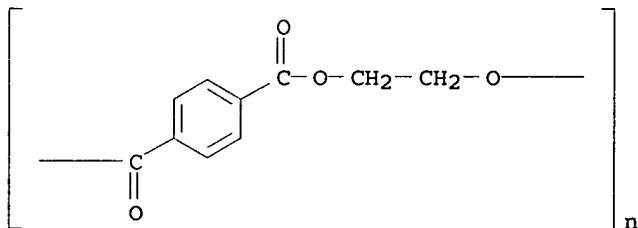
IC ICM B05D001-26
ICS B05D007-04
CC 42-2 (Coatings, Inks, and Related Products)
IT 25067-34-9, Ethylene-vinyl alcohol copolymer
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(Soanol 30L; process for producing a coated film continuously)
IT 101-90-6DP, Resorcinol diglycidyl ether, reaction products with
 γ -aminopropyltrimethoxysilane and tetramethoxysilane oligomer
681-84-5DP, Tetramethoxysilane, reaction products with
 γ -aminopropyltrimethoxysilane and epoxy resins 1675-54-3DP,
Bisphenol A diglycidyl ether, reaction products with
 γ -aminopropyltrimethoxysilane and tetramethoxysilane
2530-83-8DP, γ -Glycidoxypolypropyltrimethoxysilane, reaction
products with Epomin SP-018 and tetramethoxysilane 9002-98-6DP,
Epomin SP-018, reaction products with γ -
glycidoxypolypropyltrimethoxysilane and tetramethoxysilane
12002-26-5DP, M-Silicate 51, reaction products with
 γ -aminopropyltrimethoxysilane and epoxy resins
13822-56-5DP, γ -Aminopropyltrimethoxysilane, reaction
products with epoxy resins and tetramethoxysilane 141087-43-6P,
Methyltrimethoxysilane-tetraethoxysilane copolymer
RL: IMF (Industrial manufacture); PEP (Physical, engineering or
chemical process); TEM (Technical or engineered material use); PREP
(Preparation); PROC (Process); USES (Uses)
(process for producing a coated film continuously)
IT 25038-59-9, PET polymer, miscellaneous
RL: MSC (Miscellaneous)
(process for producing a coated film continuously)
IT 9002-89-5, Polyvinyl alcohol
RL: PEP (Physical, engineering or chemical process); POF (Polymer in
formulation); TEM (Technical or engineered material use); PROC
(Process); USES (Uses)
(process for producing a coated film continuously)

L130 ANSWER 38 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
1997:526142 Document No. 127:222043 Crosslinked modified poly(vinyl alcohol) compositions containing inorganic laminar compounds and their manufacture. Usami, Jinichi; Yoshinaga, Masanobu (Toppan Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09202843 A2 19970805 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-10871 19960125.

AB In the title compns. inorg. laminar compds. are filled in the space among the crosslinked resins. Coating compns. containing above compns. dissolved in solvents and packaging materials having layers prepared by coating the compns. on films and drying are also claimed. The packaging materials show both good gas-barrier effects and good water resistance. The compns. are manufactured by modifying poly(vinyl alc.)-based resins to be alc.-soluble, dissolving the resins in aqueous alcs. with crosslinking, and adding inorg. laminar compds. to the resins. Thus, 10% Eval LC 101B (ethylene-vinyl alc. copolymer) solution in dimethylacetamide was modified by 0.2 mol% 3-isocyanatopropyltriethoxysilane in the presence of HCl at room temperature for 15 h to give a solid polymer and dissolved in 1:1 H₂O-MeOH at a 20% concentration. Then, a 10:50 mixture of natural montmorillonite and hexadecyltrimethylammonium bromide was added to the solution and stirred at room temperature for 48 h to give a composition, applied on a

biaxially drawn PET film by gravure coating, and dried at 120° for 30 min to give a film showing O permeation (20° and 65% relative humidity) 1.0 cm³/m²/day and 1.2 cm³/m²/day after impregnation in water.

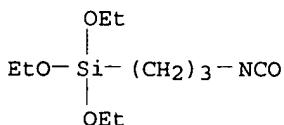
IT 25038-59-9, PET (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (films; modified poly(vinyl alc.) compns. containing laminar inorg. compds. for coatings of packaging materials with oxygen-barrier property and water resistance)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IT 194872-91-8P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (modified poly(vinyl alc.) compns. containing laminar inorg. compds. for coatings of packaging materials with oxygen-barrier property and water resistance)
 RN 194872-91-8 HCPLUS
 CN Ethenol, polymer with ethene and triethoxy(3-isocyanatopropyl) silane (9CI) (CA INDEX NAME)

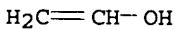
CM 1

CRN 24801-88-5
 CMF C10 H21 N O4 Si



CM 2

CRN 557-75-5
 CMF C2 H4 O



CM 3

CRN 74-85-1

CMF C2 H4

 $\text{H}_2\text{C}=\text{CH}_2$

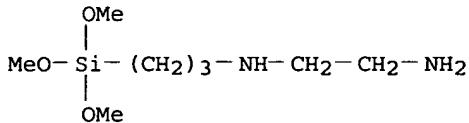
IC ICM C08L029-04
 ICS C08L029-04; B32B027-20; B32B027-30; B65D081-24; C08F008-00;
 C08F008-42; C08F216-06; C08K003-36; C09D129-04
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 38
 IT 25038-59-9, PET (polyester), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (films; modified poly(vinyl alc.) compns. containing laminar inorg.
 compds. for coatings of packaging materials with oxygen-barrier
 property and water resistance)
 IT 194872-91-8P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (modified poly(vinyl alc.) compns. containing laminar inorg. compds.
 for coatings of packaging materials with oxygen-barrier property
 and water resistance)

L130 ANSWER 39 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1997:480388 Document No. 127:110061 Gas-barrier films having coatings
 containing laminar inorganic compounds. Kimura, Masahiro; Harada,
 Hiroshi; Abe, Koichi (Toray Industries, Inc., Japan). Jpn. Kokai
 Tokkyo Koho JP 09151265 A2 19970610 Heisei, 7 pp. (Japanese).
 CODEN: JKXXAF. APPLICATION: JP 1995-313169 19951130.
 AB The films, useful for food and drug packagings, comprise
 thermoplastic resin base materials, ≥ 1 side of which have
 coatings containing (A) water-soluble polymers, (B) water-soluble or
 water-dispersible polyurethanes, and (C) layered inorg. compds.
 Thus, a coating contained poly(vinyl alc.) (I; saponification degree 98.5
 mol%, d.p. 2400), Hydran HW 350 (II), and Kunipia F
 (montmorillonite) in 90:10 a mixture of H₂O and i-PrOH. The coating
 was applied onto 1 side of a corona-treated Lumirror and dried to
 give a film containing I, II, and Kunipia F at weight ratio 45:5:50 showing
 O permeability 16.0 mL/m²-day-MPa. The film was adhered on T 3501
 (polypropylene film) via a polyurethane adhesive to give test pieces
 showing peel strength 1.19, 0.98, and 0.95 N/cm initially, after
 processing with Gelbo tester, and 48 h at 40° followed by 96
 h at RH 90%, resp.
 IT 9002-89-5, Poly(vinyl alcohol)
 RL: FFD (Food or feed use); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); BIOL
 (Biological study); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

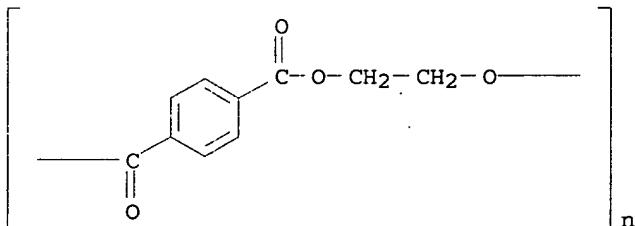
CM 1

CRN 557-75-5
 CMF C2 H4 O $\text{H}_2\text{C}=\text{CH}-\text{OH}$

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)
 RN 1760-24-3 HCAPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX
 NAME)



IT 25038-59-9, Lumirror, miscellaneous
 RL: MSC (Miscellaneous)
 (substrates; manufacture of moisture-resistant gas-barrier films
 having coatings containing mixed water-soluble polymers filled with
 laminar inorg. compds. for packagings)
 RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C08J007-04
 ICS B32B009-00; B32B027-16; B32B027-20; B32B027-32; B32B027-40;
 C08L029-02; C08L075-06
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 17, 42
 IT 9002-89-5, Poly(vinyl alcohol) 95032-12-5, Elastron H 38
 122878-75-5, Hydran HW 350
 RL: FFD (Food or feed use); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); BIOL
 (Biological study); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)
 IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 127546-20-7, Na-Ts 187247-40-1, Kunipia F
 RL: MOA (Modifier or additive use); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)
 IT 9003-07-0, Polypropylene 25038-59-9, Lumirror,
 miscellaneous
 RL: MSC (Miscellaneous)
 (substrates; manufacture of moisture-resistant gas-barrier films
 having coatings containing mixed water-soluble polymers filled with

laminar inorg. compds. for packagings)

L130 ANSWER 40 OF 52 HCAPLUS COPYRIGHT 2005 ACS on STN
 1997:480387 Document No. 127:110060 Gas-barrier films having
 moisture-resistant coatings containing laminar inorganic compounds.
 Kimura, Masahiro; Harada, Hiroshi; Abe, Koichi (Toray Industries,
 Inc., Japan). Jpn. Kokai Tokkyo Koho JP 09151264 A2 19970610
 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1995-313168 19951130.

AB The films, useful for food and drug packagings, comprise
 thermoplastic resin base materials, ≥ 1 side of which have
 coatings containing (A) water-soluble polymers, (B) water-soluble or
 water-dispersible polymers^o, and (C) layered inorg. compds.
 Thus, a coating contained poly(vinyl alc.) (I; saponification degree 98.5
 mol%, d.p. 2400), 50:40:10 acrylic acid-Bu acrylate-Me methacrylate
 copolymer (II), and Kunipia F (montmorillonite) in 90:10 a mixture of
 H₂O and i-PrOH. The coating was applied onto 1 side of a
 corona-treated Lumirror and dried to give a film containing I, II, and
 Kunipia F at weight ratio 40:10:50 showing O permeability 14.8
 mL/m²-day-MPa. The film was adhered with T 3501 (polypropylene
 film) via a polyurethane adhesive to give test pieces showing peel
 strength 0.98 N/cm initially and 0.39 N/cm after 30 min in H₂O at
 95°.

IT 9002-89-5, Poly(vinyl alcohol) 126367-70-2
 RL: FFD (Food or feed use); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); BIOL
 (Biological study); USES (Uses)

(manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)

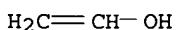
RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



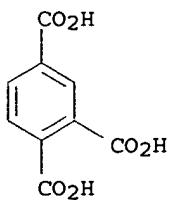
RN 126367-70-2 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-
 benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid,
 1,4-butanediol, 2,2-dimethyl-1,3-propanediol and 1,2-ethanediol
 (9CI) (CA INDEX NAME)

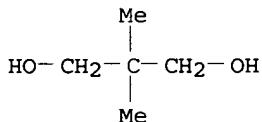
CM 1

CRN 528-44-9

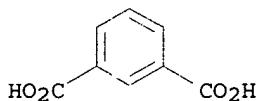
CMF C9 H6 O6



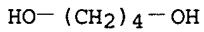
CM 2

CRN 126-30-7
CMF C5 H12 O2

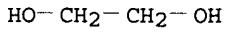
CM 3

CRN 121-91-5
CMF C8 H16 O4

CM 4

CRN 110-63-4
CMF C4 H10 O2

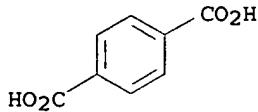
CM 5

CRN 107-21-1
CMF C2 H6 O2

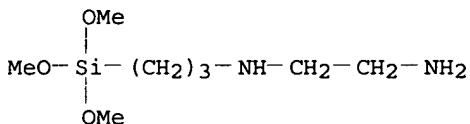
CM 6

CRN 100-21-0

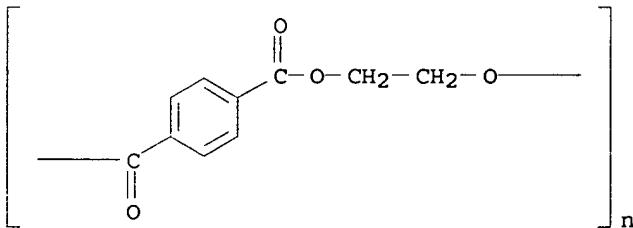
CMF C8 H6 O4



IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.
 compds. for packagings)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX
 NAME)



IT 25038-59-9, Lumirror, miscellaneous
 RL: MSC (Miscellaneous)
 (substrates; manufacture of moisture-resistant gas-barrier films
 having coatings containing mixed water-soluble polymers filled with
 laminar inorg. compds. for packagings)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



IC ICM C08J007-04
 ICS B32B009-00; B32B027-16; B32B027-20; B32B027-30; C08L029-02;
 C08L033-12
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 17, 42
 IT 9002-89-5, Poly(vinyl alcohol) 26300-51-6 28206-15-7,
 Acrylic acid-acrylonitrile-butyl acrylate-methyl methacrylate
 copolymer 28572-86-3, Acrylic acid-butyl acrylate-methyl
 methacrylate-N-methylolacrylamide copolymer 126367-70-2
 RL: FFD (Food or feed use); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); BIOL
 (Biological study); USES (Uses)
 (manufacture of moisture-resistant gas-barrier films having coatings
 containing mixed water-soluble polymers filled with laminar inorg.

compds. for packagings)

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
127546-20-7, Na-Ts 187247-40-1, Kunipia F
RL: MOA (Modifier or additive use); USES (Uses)
(manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

IT 9003-07-0, Polypropylene 25038-59-9, Lumirror,
miscellaneous
RL: MSC (Miscellaneous)
(substrates; manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

L130 ANSWER 41 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
1997:480386 Document No. 127:110059 Gas-barrier films having good coating adhesion and their preparation methods. Harada, Hiroshi; Kimura, Masahiro; Abe, Koichi (Toray Industries, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 09151263 A2 19970610 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-313170 19951130.

AB The films, useful for food and drug packagings, comprise thermoplastic resin base materials, ≥ 1 side of which have coatings containing (A) water-soluble polymers, (B) water-soluble or water-dispersible polymers showing $T_g \leq 70^\circ$, and (C) layered inorg. compds. Thus, a coating contained poly(vinyl alc.) (I; saponification degree 98.5 mol%, d.p. 2400), acrylic acid-Et acrylate-Me methacrylate copolymer (II; $T_g 40^\circ$), and Kunipia F (montmorillonite) in 90:10 a mixture of H₂O and i-PrOH. The coating was applied onto 1 side of a corona-treated Lumirror and dried to give a film containing I, II, and Kunipia F at weight ratio 45:5:50 showing O permeability 14.8 mL/m²-day-MPa initially and 24.6 mL/m²-day-MPa after processing with Gelbo tester. The film was adhered on T 3501 (polypropylene film) via a polyurethane adhesive to give test pieces showing peel strength 1.21 N/cm initially and 0.43 N/cm after 30 min in H₂O at 95°.

IT 9002-89-5, Poly(vinyl alcohol)
RL: FFD (Food or feed use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

RN 9002-89-5 HCPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

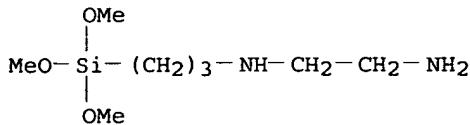
CM 1

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
RL: MOA (Modifier or additive use); USES (Uses)
(manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

RN 1760-24-3 HCPLUS
CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



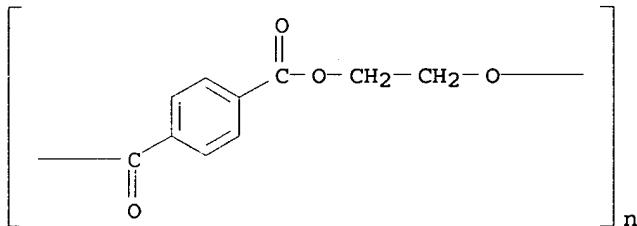
IT 25038-59-9, Lumirror, miscellaneous

RL: MSC (Miscellaneous)

(substrates; manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

RN 25038-59-9 HCPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IC ICM C08J007-04

ICS B05D007-04; B05D007-24; B32B007-02; B32B027-32; B32B027-36; B32B027-40; C08J007-18

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 17, 42

IT 9002-89-5, Poly(vinyl alcohol) 25135-39-1, Acrylic

acid-ethyl acrylate-methyl methacrylate copolymer 26300-51-6, Acrylic acid-butyl acrylate-methyl methacrylate copolymer

111214-34-7, Hydran AP 40

RL: FFD (Food or feed use); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane

127546-20-7, Na-Ts 187247-40-1, Kunipia F

RL: MOA (Modifier or additive use); USES (Uses)

(manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

IT 9003-07-0, Polypropylene 25038-59-9, Lumirror,

miscellaneous

RL: MSC (Miscellaneous)

(substrates; manufacture of moisture-resistant gas-barrier films having coatings containing mixed water-soluble polymers filled with laminar inorg. compds. for packagings)

L130 ANSWER 42 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

1997:442690 Document No. 127:96672 Surface-modified resin molded

products with good maintainability of antifogging property. Miyake, Hiroshi; Yamauchi, Hiroyuki (Nippon Carbide Industries Co., Inc.,

Japan). Jpn. Kokai Tokkyo Koho JP 09136374 A2 19970527 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-321272 19951116.

AB The products, such as agricultural films, eyeglass lenses, mirrors, etc., have base-coat layers containing inorg. hydrophilic powders and coupling agents and top-coat layers containing hydrophilic resins and/or surfactants. Thus, a 100 μm -thick ethylene-tetrafluoroethylene copolymer film was treated with corona discharge, coated with A 520 (alumina sol) and 1.5 % (vs. A 520) KBM 303, dried, overcoated with Cerasol 250A (polyethylene glycol), and dried to give a coated film showing excellent water repellency and transparency after >21-days storage in 80° water.

IT 9002-89-5, Gohsenol NL 05

RL: TEM (Technical or engineered material use); USES (Uses)
(Gohsenol AL 06, base coating; surface-modified resin molded products with good maintainability of antifogging property)

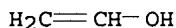
RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

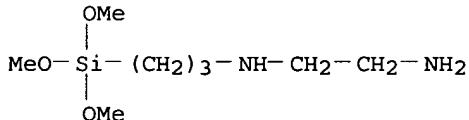


IT 1760-24-3, TSL 8340

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(base coating; surface-modified resin molded products with good maintainability of antifogging property)

RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

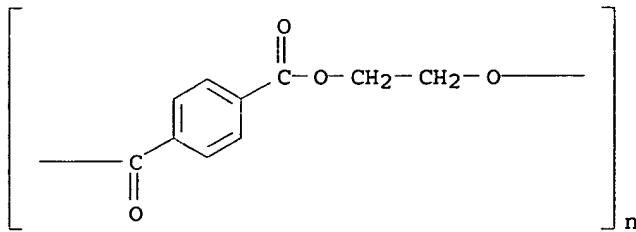


IT 25038-59-9, Poly(ethylene terephthalate), properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(support; surface-modified resin molded products with good maintainability of antifogging property)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IC ICM B32B009-00
 ICS B32B027-18; C08J007-04
 CC 42-10 (Coatings, **Inks**, and Related Products)
 Section cross-reference(s): 38
 IT 9002-89-5, Gohsenol NL 05
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Gohsenol AL 06, base coating; surface-modified resin molded
 products with good maintainability of antifogging property)
 IT 1760-24-3, TSL 8340 3388-04-3, KBM 303 65380-84-9, KR 44
 84431-92-5, AL M
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (base coating; surface-modified resin molded products with good
 maintainability of antifogging property)
 IT 9002-86-2, Poly(vinyl chloride) 25038-59-9, Poly(ethylene-
 terephthalate), properties 25038-71-5, Ethylene-
 tetrafluoroethylene copolymer
 RL: PEP (Physical, engineering or chemical process); PRP
 (Properties); PROC (Process)
 (support; surface-modified resin molded products with good
 maintainability of antifogging property)

L130 ANSWER 43 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1996:667040 Document No. 125:278108 Barrier composite films and
 process for production. Murai, Takaaki; Miyake, Ryuta (Daicel
 Chemical Industries, Ltd., Japan). PCT Int. Appl. WO 9628299 A1
 19960919, 40 pp. DESIGNATED STATES: W: CN, KR, SG, US, VN; RW: AT,
 BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE.
 (Japanese). CODEN: PIXXD2. APPLICATION: WO 1996-JP614 19960313.
 PRIORITY: JP 1995-83308 19950314.

AB A barrier composite film is produced by coating an inorg. layer made
 of silicon oxide or the like and a coating layer containing a silane
 coupling agent and a barrier resin (such as vinylidene chloride
 copolymer, ethylene-vinyl alc. copolymer or the like) successively
 on ≥ 1 surface of a base film made of polyester or the like.
 The amount of the silane coupling agent is .apprx.0.05-10 parts/100
 parts barrier resin. A heat sealing layer may be formed on the
 coating layer or the other surface of the base film. Such a barrier
 composite film is excellent in transparency and maintains its high
 gas-barrier properties and adhesion of the layers over a long period
 of time, even when the layers are thin. Further, the barrier
 properties and the adhesion of the layers are little lowered even
 when an external mech. force is applied to the film or when the film
 is stored under the conditions of high temperature and humidity. Thus, a
 biaxially drawn PET polyester film was vacuum deposited with Si
 oxide and coated with Saran resin F 216 containing 1 phr TSL 8350 to
 prepare a barrier film.
 IT 25067-34-9, Soarnol 30L
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (barrier resins; films vacuum deposited with inorg. layer and

coated with barrier resins and silane coupling agents)
 RN 25067-34-9 HCAPLUS
 CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

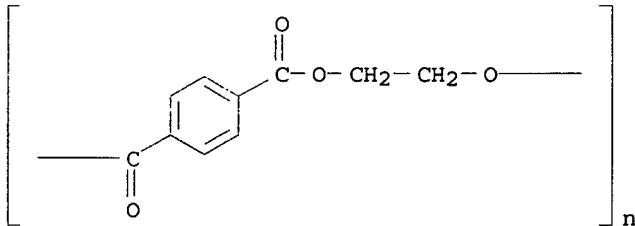
$\text{H}_2\text{C}=\text{CH}-\text{OH}$

CM 2

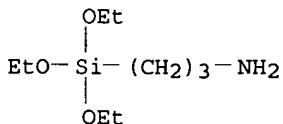
CRN 74-85-1
 CMF C2 H4

$\text{H}_2\text{C}=\text{CH}_2$

IT 25038-59-9, PET polyester, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (films; films vacuum deposited with inorg. layer and coated with
 barrier resins and silane coupling agents)
 RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



IT 919-30-2, TSL 8331
 RL: MOA (Modifier or additive use); USES (Uses)
 (silane coupling agents; films vacuum deposited with inorg. layer
 and coated with barrier resins and silane coupling agents)
 RN 919-30-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IC ICM B32B009-00
 ICS B32B027-32; B32B027-34; B32B027-36
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42

IT 75-35-4D, Vinylidene chloride, polymers with (meth)acrylates
 79-10-7D, Acrylic acid, esters, polymers with vinylidene chloride
 79-41-4D, Methacrylic acid, esters, polymers with vinylidene
 chloride 9010-76-8, Saran F 216 25067-34-9, Soarnol 30L
 26781-55-5, Vinyl acetate-vinylidene chloride copolymer
 29760-65-4, Methacrylic acid-vinylidene chloride copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (barrier resins; films vacuum deposited with inorg. layer and
 coated with barrier resins and silane coupling agents)

IT 9003-07-0, Polypropylene 25038-59-9, PET polyester, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (films; films vacuum deposited with inorg. layer and coated with
 barrier resins and silane coupling agents)

IT 78-08-0, TSL 8311 919-30-2, TSL 8331 2530-83-8, TSL 8350
 4420-74-0, TSL 8380
 RL: MOA (Modifier or additive use); USES (Uses)
 (silane coupling agents; films vacuum deposited with inorg. layer
 and coated with barrier resins and silane coupling agents)

L130 ANSWER 44 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1996:571826 Document No. 125:198697 Gas-barrier coating for laminated
 packaging material. Yamamoto, Tetsuya; Naka, Akio; Hori, Yukiko
 (Nippon Catalytic Chem Ind, Japan). Jpn. Kokai Tokkyo Koho JP
 08165366 A2 19960625 Heisei, 10 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 1994-309166 19941213.

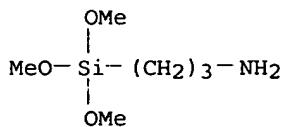
AB A gas-barrier coating prepared by the reaction of an amino
 group-containing silane with a compound containing functional groups reactive
 toward the amino group and, optionally, with a hydroxy, alkoxy or
 acyloxy group-containing metal compound is coated on a resin base material
 to form a gas-barrier sheet. The coated sheet is laminated with
 ≥ 1 thermoplastic film to provide a multilayer laminate useful
 as gas-barrier packaging material. γ -
 Aminopropyltrimethoxysilane 40 g and resorcinol diglycidyl ether 22
 g were reacted in toluene at 70° for 3 h, the resultant then
 was reacted with tetramethoxysilane 42 g in the presence of methanol
 (18 g) and water (1.25 g) at 30° for 1 h to give a coating
 material which was applied on a 12- μ m PET film and dried to form
 a 3- μ m coating. A gas-barrier laminate was obtained by
 laminating the coated PET sheet with a 50- μ m polypropylene film.

IT 52238-11-6P, γ -Aminopropyltrimethoxysilane-bisphenol A
 diglycidyl ether copolymer 160314-84-1P
 164654-42-6P 164654-46-0P 181183-77-7P
 181183-78-8P 181183-79-9P 181183-80-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating for laminated packaging material)

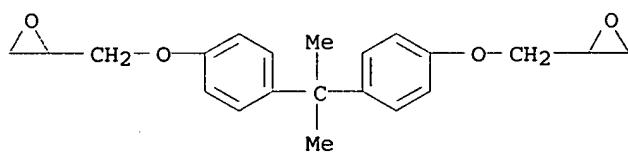
RN 52238-11-6 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)-, polymer with
 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane
] (9CI) (CA INDEX NAME)

CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si

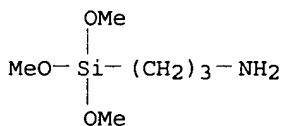


CM 2

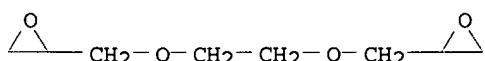
CRN 1675-54-3
CMF C21 H24 O4

RN 160314-84-1 HCPLUS
 CN Silicic acid (H4SiO4), tetramethyl ester, polymer with
 2,2'-[1,2-ethanediylbis(oxymethylene)]bis[oxirane] and
 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

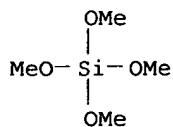
CRN 13822-56-5
CMF C6 H17 N O3 Si

CM 2

CRN 2224-15-9
CMF C8 H14 O4

CM 3

CRN 681-84-5
CMF C4 H12 O4 Si



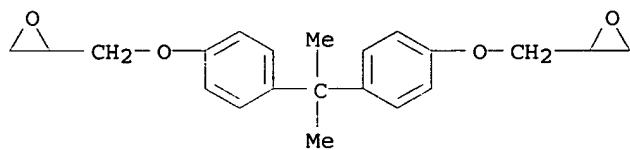
RN 164654-42-6 HCPLUS

CN Silicic acid (H₄SiO₄), tetraethyl ester, polymer with
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bis[oxirane]
] and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 1675-54-3

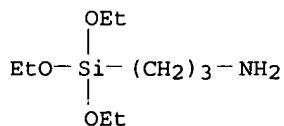
CMF C21 H24 O4



CM 2

CRN 919-30-2

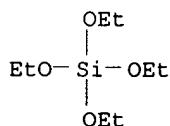
CMF C9 H23 N O3 Si



CM 3

CRN 78-10-4

CMF C8 H20 O4 Si

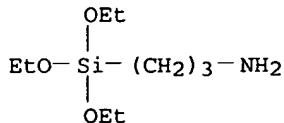


RN 164654-46-0 HCPLUS

CN Silicic acid (H₄SiO₄), tetramethyl ester, polymer with
2,2'-(1,3-phenylenebis(oxymethylene))bis[oxirane] and
3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

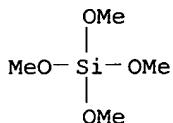
CM 1

CRN 919-30-2
CMF C9 H23 N O3 Si



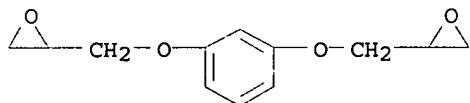
CM 2

CRN 681-84-5
CMF C4 H12 O4 Si



CM 3

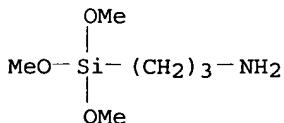
CRN 101-90-6
CMF C12 H14 O4



RN 181183-77-7 HCPLUS
CN Silicic acid (H4SiO4), tetramethyl ester, polymer with
2,2'-(1,3-phenylenebis(oxymethylene))bis[oxirane] and
3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

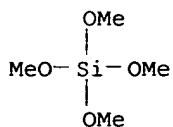
CM 1

CRN 13822-56-5
CMF C6 H17 N O3 Si

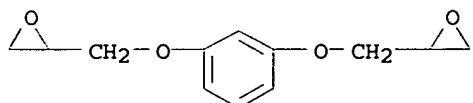


CM 2

CRN 681-84-5
CMF C4 H12 O4 Si

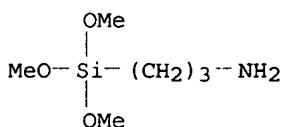


CM 3

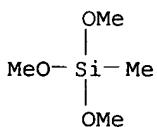
CRN 101-90-6
CMF C12 H14 O4

RN 181183-78-8 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)-, polymer with
 2,2'-(1,3-phenylenebis(oxymethylene))bis[oxirane] and
 trimethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

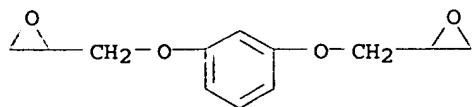
CRN 13822-56-5
CMF C6 H17 N O3 Si

CM 2

CRN 1185-55-3
CMF C4 H12 O3 Si

CM 3

CRN 101-90-6
CMF C12 H14 O4



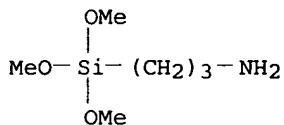
RN 181183-79-9 HCPLUS

CN 1-Butanol, titanium(4+) salt, polymer with 2,2'-(1,3-phenylenebis(oxymethylene))bis[oxirane] and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 13822-56-5

CMF C6 H17 N O3 Si



CM 2

CRN 5593-70-4

CMF C4 H10 O . 1/4 Ti

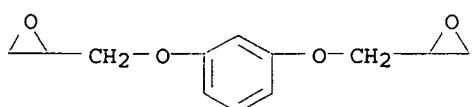
H3C-CH2-CH2-CH2-OH

●1/4 Ti(IV)

CM 3

CRN 101-90-6

CMF C12 H14 O4



RN 181183-80-2 HCPLUS

CN Silicic acid (H4SiO4), tetramethyl ester, polymer with bis(isocyanatomethyl)benzene and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 25854-16-4

CMF C10 H8 N2 O2

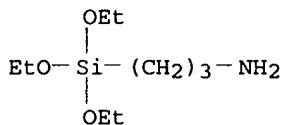
CCI IDS



2 [D1- CH₂- NCO]

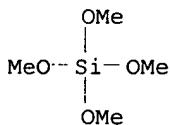
CM 2

CRN 919-30-2
CMF C₉ H₂₃ N O₃ Si

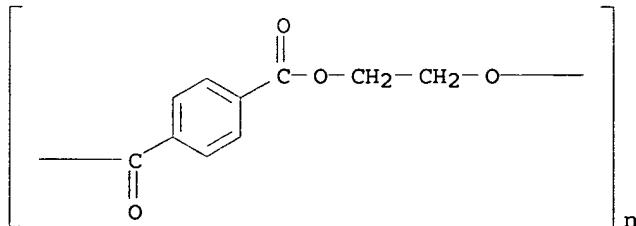


CM 3

CRN 681-84-5
CMF C₄ H₁₂ O₄ Si



IT 25038-59-9, Polyethylene terephthalate, uses
25067-34-9, Ethylene-vinyl alcohol copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(laminated packaging material having gas-barrier coating)
RN 25038-59-9 HCPLUS
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
INDEX NAME)



RN 25067-34-9 HCPLUS
CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 OH₂C=CH-OH

CM 2

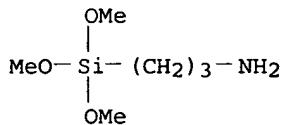
CRN 74-85-1
CMF C2 H4H₂C=CH₂

IC ICM C08J007-04
ICS B32B007-12; B32B009-00; C08L027-08; C08L029-02; C09D183-04
ICI C08K003-18
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38
IT 52238-11-6P, γ -Aminopropyltrimethoxysilane-bisphenol A
diglycidyl ether copolymer 160314-84-1P
164654-42-6P 164654-46-0P 181183-77-7P
181183-78-8P 181183-79-9P 181183-80-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(gas-barrier coating for laminated packaging material)
IT 9002-85-1, Polyvinylidene chloride 9003-07-0, Polypropylene
25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene
terephthalate, uses 25067-34-9, Ethylene-vinyl alcohol
copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(laminated packaging material having gas-barrier coating)

L130 ANSWER 45 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
1996:571825 Document No. 125:197931 Laminated packaging material with
gas-barrier coating. Yamamoto, Tetsuya; Naka, Akio; Hori, Yukiko
(Nippon Catalytic Chem Ind, Japan). Jpn. Kokai Tokkyo Koho JP
08165365 A2 19960625 Heisei, 10 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1994-309165 19941213.

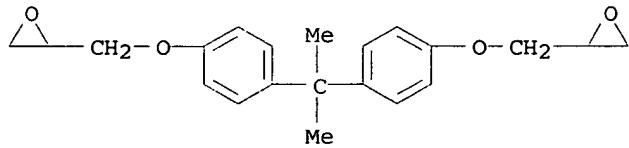
AB A gas-barrier laminate comprises a resin base material coated with a
gas-barrier adhesive layer comprising the reaction products of an
amino group-containing silane with a compound containing functional groups
reactive toward the amino group and a gas-barrier vapor deposition
layer. The laminate is useful as gas-barrier packaging material.
 γ -Aminopropyltrimethoxysilane 40 g and resorcinol diglycidyl
ether 22 g were reacted in toluene at 70° for 3 h, the
resultant then was reacted with tetramethoxysilane 42 g in the
presence of methanol and water at 30° for 1 h to give a
coating material which was applied on a 12- μ m PET film and dried
to form a 3- μ m coating. A gas-barrier laminate was obtained by
vacuum depositing 500- \AA silica layer (10⁻⁴ Torr, 80 m/min) onto
the coated PET film.
IT 52238-11-6P, γ -Aminopropyltrimethoxysilane-bisphenol A
diglycidyl ether copolymer 160314-84-1P
164654-42-6P 181183-77-7P 181183-80-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)
 (gas-barrier coating for laminated packaging material)
 RN 52238-11-6 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)-, polymer with
 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane
] (9CI) (CA INDEX NAME)
 CM 1
 CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

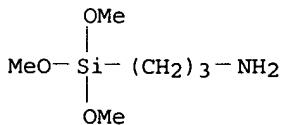
CRN 1675-54-3
 CMF C21 H24 O4



RN 160314-84-1 HCPLUS
 CN Silicic acid (H4SiO4), tetramethyl ester, polymer with
 2,2'-(1,2-ethanediylbis(oxymethylene)]bis[oxirane] and
 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

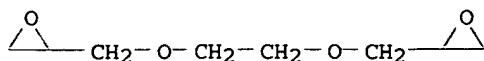
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si

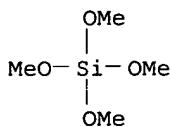


CM 2

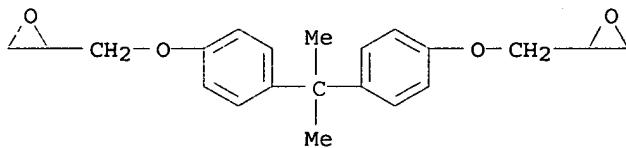
CRN 2224-15-9
 CMF C8 H14 O4



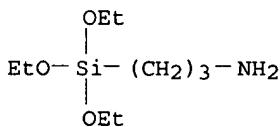
CM 3

CRN 681-84-5
CMF C4 H12 O4 SiRN 164654-42-6 HCAPLUS
CN Silicic acid (H4SiO4), tetraethyl ester, polymer with
2,2'-[{(1-methylethylidene)bis(4,1-phenyleneoxymethylene)}bis[oxirane]
] and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

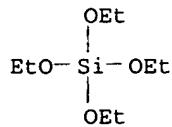
CRN 1675-54-3
CMF C21 H24 O4

CM 2

CRN 919-30-2
CMF C9 H23 N O3 Si

CM 3

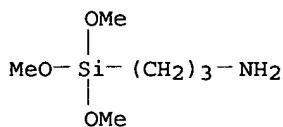
CRN 78-10-4
CMF C8 H20 O4 Si



RN 181183-77-7 HCPLUS
 CN Silicic acid (H₄SiO₄), tetramethyl ester, polymer with
 2,2'-(1,3-phenylenebis(oxymethylene))bis[oxirane] and
 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

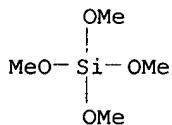
CM 1

CRN 13822-56-5
 CMF C₆ H₁₇ N O₃ Si



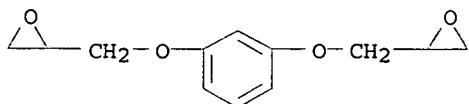
CM 2

CRN 681-84-5
 CMF C₄ H₁₂ O₄ Si



CM 3

CRN 101-90-6
 CMF C₁₂ H₁₄ O₄



RN 181183-80-2 HCPLUS
 CN Silicic acid (H₄SiO₄), tetramethyl ester, polymer with
 bis(isocyanatomethyl)benzene and 3-(triethoxysilyl)-1-propanamine
 (9CI) (CA INDEX NAME)

CM 1

CRN 25854-16-4
 CMF C₁₀ H₈ N₂ O₂

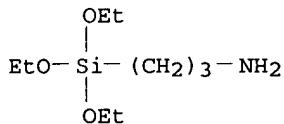
CCI IDS



$$2 \left[\text{D1-CH}_2\text{-NCO} \right]$$

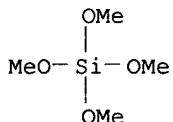
CM 2

CRN 919-30-2
 CMF C9 H23 N O3 Si

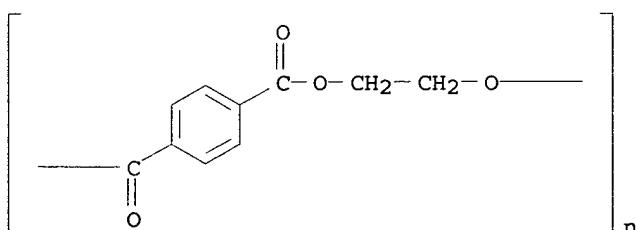


CM 3

CRN 681-84-5
 CMF C4 H12 O4 Si



IT 25038-59-9, Polyethylene terephthalate, uses
 25067-34-9, Ethylene-vinyl alcohol copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (laminated packaging material with gas-barrier coating)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA
 INDEX NAME)



RN 25067-34-9 HCPLUS

CN Ethenol, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H2C=CH-OH

CM 2

CRN 74-85-1

CMF C2 H4

H2C=CH2IC ICM C08J007-04
ICS B32B009-00; C09D183-04; C09J183-04; C23C014-10

ICI C08K003-18

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

IT 52238-11-6P, γ -Aminopropyltrimethoxysilane-bisphenol A
diglycidyl ether copolymer 160314-84-1P
164654-42-6P 181183-77-7P 181183-80-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(gas-barrier coating for laminated packaging material)

IT 9003-07-0, Polypropylene 25038-54-4, Nylon 6, uses

25038-59-9, Polyethylene terephthalate, uses

25067-34-9, Ethylene-vinyl alcohol copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
(laminated packaging material with gas-barrier coating)

L130 ANSWER 46 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

1993:104158 Document No. 118:104158 Transparent materials coated with
ink-receptive layers of hydrophilic interpenetrating networks.Iqbal, Mohammad; Miller, Alan G.; Smith, Terrance P.; Stofko, John
J., Jr. (Minnesota Mining and Manufacturing Co., USA). PCT Int.Appl. WO 9207722 A1 19920514, 31 pp. DESIGNATED STATES: W: AU, BR,
CA, JP, KR; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE.
(English). CODEN: PIXXD2. APPLICATION: WO 1991-US6686 19910913.

PRIORITY: US 1990-602738 19901024.

AB Ink-receptive coatings with good durability for transparent plastics
contain title networks comprising ≥ 1 crosslinkable polymer
and ≥ 1 water-absorbent polymer. Thus, an aqueous solution containing
ammonium acrylate-N,N-dimethylacrylamide-N-vinyl-2-pyrrolidone
copolymer was mixed with an aqueous solution containing surfactant, poly(vinyl
alc.), and XAMA-7 (polyfunctional aziridine) crosslinker, applied to
a poly(vinylidene chloride)-primed, gelatin-subbed PET film, and
dried 5 min at 90° to give a coating. Ink containing Direct Blue
99 was jet-printed onto this coated film, and after 6 min, the
imaged film showed no dye removal from the image in water.

IT 52229-50-2D, reaction products with aminopropylmorpholine

RL: USES (Uses)
(bis(iodomethyl)oxetane-crosslinked, ink-receptive coatings
containing semi-interpenetrating networks of poly(vinylpyrrolidone)
and, for transparent PET films)

RN 52229-50-2 HCPLUS
 CN 2,5-Furandione, polymer with methoxyethene, alternating (9CI) (CA INDEX NAME)

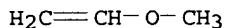
CM 1

CRN 108-31-6
 CMF C4 H2 O3

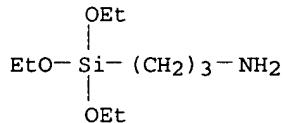


CM 2

CRN 107-25-5
 CMF C3 H6 O



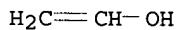
IT 919-30-2D, 3-Aminopropyltriethoxysilane, reaction products with methoxyethylamine and maleic anhydride-Me vinyl ether copolymer
 RL: USES (Uses)
 (crosslinked, ink-receptive coatings containing semi-interpenetrating networks of poly(vinylpyrrolidone) and, for transparent PET films)
 RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5
 RL: USES (Uses)
 (ink-receptive coatings containing semi-interpenetrating networks of crosslinked polymers and Vinol 540, for transparent PET films)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

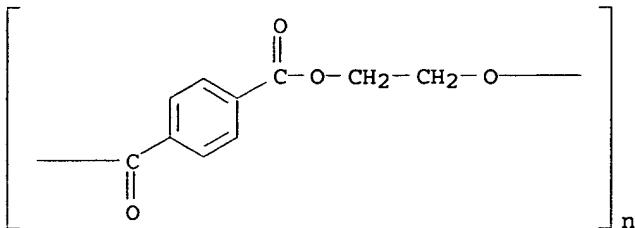
CM 1

CRN 557-75-5
 CMF C2 H4 O



IT 25038-59-9, miscellaneous
 RL: MSC (Miscellaneous)
 (ink-receptive coatings for films of, semi-interpenetrating networks of crosslinked polymers and hydrophilic polymers as)

RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM B41M005-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42
 IT 123-00-2D, 4-Morpholinepropanamine, reaction products with maleic anhydride-Me vinyl ether alternating copolymer 52229-50-2D, reaction products with aminopropylmorpholine
 RL: USES (Uses)
 (bis(iodomethyl)oxetane-crosslinked, ink-receptive coatings containing semi-interpenetrating networks of poly(vinylpyrrolidone) and, for transparent PET films)
 IT 109-85-3D, 2-Methoxyethylamine, reaction products with aminopropyltriethoxysilane and maleic anhydride-Me vinyl ether copolymer 919-30-2D, 3-Aminopropyltriethoxysilane, reaction products with methoxyethylamine and maleic anhydride-Me vinyl ether copolymer
 RL: USES (Uses)
 (crosslinked, ink-receptive coatings containing semi-interpenetrating networks of poly(vinylpyrrolidone) and, for transparent PET films)
 IT 9002-89-5 98002-50-7, Poly(vinyl alcohol)
 RL: USES (Uses)
 (ink-receptive coatings containing semi-interpenetrating networks of crosslinked polymers and Vinol 540, for transparent PET films)
 IT 25038-59-9, miscellaneous
 RL: MSC (Miscellaneous)
 (ink-receptive coatings for films of, semi-interpenetrating networks of crosslinked polymers and hydrophilic polymers as)

L130 ANSWER 47 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1990:480566 Document No. 113:80566 An extrusion coatable polyester film having an aminosilane hydrolyzate primer and extrusion coated laminates thereof. Swofford, Howard Wayne (Hoechst Celanese Corp., USA). Eur. Pat. Appl. EP 359017 A2 19900321, 8 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1989-115809 19890828. PRIORITY: US 1988-240701 19880906.

AB The adhesion of polymeric extrusion coatings on polyester films is improved by pretreating the films with hydrolyzed R1aSiR2bR3c (R1 = functional group having ≥ 1 primary amino group, R2 = C1-8 alkoxy, acetoxy, or halo, R3 = C1-8 alkyl or Ph, a, b ≥ 1 , c ≥ 0 , a + b + c = 4). Thus, 1.5% N-(2-ethyl)-3-aminopropyltrimethoxysilane was dispersed in water, and 0.2% HOAc was added to give a hydrolyzate. A 12 μ m-thick, stretched, corona-treated PET film was coated with this hydrolyzate at 2.5 mg/m² and extrusion-coated with 25- μ m LDPE layer to give a laminate that could not be separated in ASTM D882 E4 peel test or when

subjected to hot water, PhMe, or THF, whereas without the hydrolyzate pretreatment, the LDPE-PET adhesion was 16 mN/mm in the peel test.

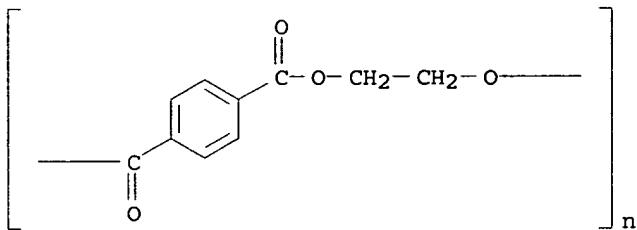
IT 25038-59-9, Poly(ethylene terephthalate), uses and miscellaneous

RL: USES (Uses)

(extrusion coating of corona-treated oriented films of, hydrolyzed aminosilane pretreatment in, for improved adhesion)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl) (9CI) (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)

(extrusion coating with, hydrolyzed silane pretreatment of polyester film substrates in, for improved adhesion)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



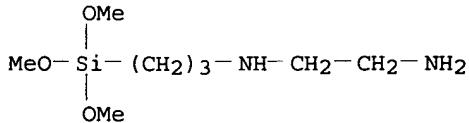
IT 1760-24-3D, hydrolyzed 13822-56-5D, hydrolyzed

RL: USES (Uses)

(polyester films treated by, for improved adhesion in extrusion coating with other polymers)

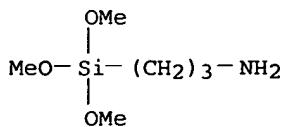
RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 13822-56-5 HCAPLUS

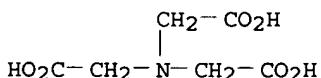
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IC ICM C08J007-04
ICS C09D183-08
ICI C08L067-02
CC 42-2 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38
IT 25038-59-9, Poly(ethylene terephthalate), uses and
miscellaneous
RL: USES (Uses)
(extrusion coating of corona-treated oriented films of,
hydrolyzed aminosilane pretreatment in, for improved adhesion)
IT 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl
acetate) 24937-78-8, Ethylene-vinyl acetate copolymer
28516-43-0, Surlyn 1652
RL: USES (Uses)
(extrusion coating with, hydrolyzed silane pretreatment of
polyester film substrates in, for improved adhesion)
IT 1760-24-3D, hydrolyzed 13822-56-5D, hydrolyzed
RL: USES (Uses)
(polyester films treated by, for improved adhesion in extrusion
coating with other polymers)

L130 ANSWER 48 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
1988:206367 Document No. 108:206367 Surface treatment and coating of
steel with polyolefins. Kayazono, Yoshihisa; Suzuki, Kazuyuki;
Kato, Hirotada (Nippon Steel Corp., Japan). Jpn. Kokai Tokkyo Koho
JP 62255140 A2 19871106 Showa, 16 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1986-98269 19860430.

AB Steel is coated with a chromating layer containing a silica dispersing
agent; a layer of a reaction product of an alkoxy group-containing Ti,
Zr, Al, and/or B compound with a Si compound and silanol-terminated
polydimethylsiloxane; a chelating agent-silane coupling agent mixed
layer; a modified polyolefin layer; and a polyolefin layer. The
coatings have good adhesion and corrosion resistance. Steel was
degreased, washed with acids, chromated, treated with a hydrolyzed
(EtO)4Si-hydrolyzed (iso-PrO)4Ti-silanol-terminated
polydimethylsiloxane condensation product, treated with a
γ-anilinopropyltrimethoxysilane-EDTA mixture, coated with
ethylene-maleic anhydride copolymer, and topcoated with
polyethylene.
IT 139-13-9
RL: USES (Uses)
(chelating agents, containing silane coupling agents, for
undercoatings on steel)
RN 139-13-9 HCPLUS
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)

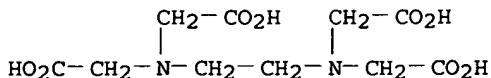


IT 60-00-4, EDTA, uses and miscellaneous
RL: USES (Uses)

(chelating agents, containing silane coupling agents, undercoatings, on steel)

RN 60-00-4 HCPLUS

CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)]



IT 9002-89-5D, Poly(vinyl alcohol), reaction products with chromic anhydride

RL: USES (Uses)

(chromating agents, containing silica dispersing agents)

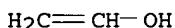
RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



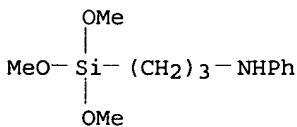
IT 3068-76-6, γ -Anilinopropyltrimethoxysilane

RL: USES (Uses)

(coupling agents, SZ 6083, containing chelating agents, undercoatings, on steel)

RN 3068-76-6 HCPLUS

CN Benzenamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane

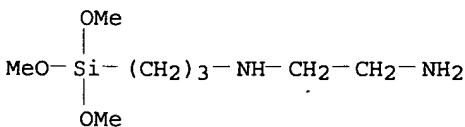
31024-56-3 35141-30-1

RL: USES (Uses)

(coupling agents, containing chelating agents, for undercoatings on steel)

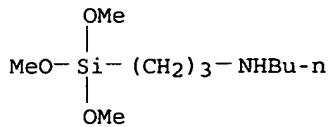
RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

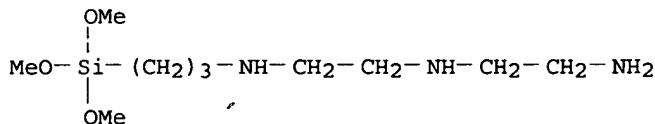


RN 31024-56-3 HCPLUS

CN 1-Butanamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 35141-30-1 HCAPLUS
 CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-(3-(trimethoxysilyl)propyl)-
 (9CI) (CA INDEX NAME)



IT 9006-26-2, Ethylene-maleic anhydride copolymer
 31069-12-2, Ethylene-maleic anhydride-propylene copolymer
 RL: USES (Uses)
 (undercoatings, on steel)
 RN 9006-26-2 HCAPLUS
 CN 2,5-Furandione, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 108-31-6
 CMF C4 H2 O3



CM 2

CRN 74-85-1
 CMF C2 H4

H₂C=CH₂

RN 31069-12-2 HCAPLUS
 CN 2,5-Furandione, polymer with ethene and 1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 115-07-1
 CMF C3 H6

H₃C-CH=CH₂

CM 2

CRN 108-31-6
CMF C4 H2 O3

CM 3

CRN 74-85-1
CMF C2 H4H₂C=CH₂

IC ICM B32B015-08
ICS B05D007-24
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 IT 102-71-6, Triethanolamine, uses and miscellaneous 139-13-9
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for
 undercoatings on steel)
 IT 60-00-4, EDTA, uses and miscellaneous
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, undercoatings,
 on steel)
 IT 1333-82-0D, Chromic anhydride, reaction products with poly(vinyl
 alc.) 9002-89-5D, Poly(vinyl alcohol), reaction products
 with chromic anhydride
 RL: USES (Uses)
 (chromating agents, containing silica dispersing agents)
 IT 3068-76-6, γ -Anilinopropyltrimethoxysilane
 RL: USES (Uses)
 (coupling agents, SZ 6083, containing chelating agents,
 undercoatings, on steel)
 IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 2530-83-8, γ -Glycidoxypropyltrimethoxysilane
 31024-56-3 35141-30-1 74113-77-2
 RL: USES (Uses)
 (coupling agents, containing chelating agents, for undercoatings on
 steel)
 IT 78-10-4D, Tetraethoxysilane, hydrolyzed, reaction products with
 hydrolyzed tetraisopropyl titanate in silanol-terminated
 polydimethylsiloxane 546-68-9D, Tetraisopropyl titanate,
 hydrolyzed, reaction products with hydrolyzed tetraethoxysilane and
 silanol-terminated polydimethylsiloxane 9006-26-2,
 Ethylene-maleic anhydride copolymer 31069-12-2,
 Ethylene-maleic anhydride-propylene copolymer
 RL: USES (Uses)
 (undercoatings, on steel)

L130 ANSWER 49 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1988:152260 Document No. 108:152260 Surface treatment and coating of
 steel with polyolefins. Kayazono, Yoshihisa; Suzuki, Kazuyuki;

Kato, Hirotada (Nippon Steel Corp., Japan). Jpn. Kokai Tokkyo Koho JP 62255141 A2 19871106 Showa, 13 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1986-98270 19860430.

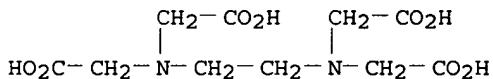
AB Steel is treated with a chromating composition containing a silica dispersing agent and reducing agents for the CrO₃, a polytitanocarbosilane, a chelating agent-silane coupling agent mixture, and a modified polyolefin and then coated with a polyolefin with good adhesion and corrosion resistance. Thus, steel was degreased, rinsed with acids, chromated with a composition containing CrO₃, poly(vinyl alc.) reducing agent, pyrogallol reducing agent, and SiO₂ (280 mg/m²), heated at 260°, treated with a polytitanocarbosilane (6-μ thick), heated at 550° with laser to cure, treated with γ-anilinopropyltrimethoxysilane (SZ 6083)-EDTA (280 mg/m²), cured at 190°, melt-coated with maleic anhydride-modified polyethylene powder (150-μ thick), and extrusion-coated with 2-mm polyethylene having 90° peel strength (150 mm/min) 29.1 kg/cm before and 28.9 or 27.2 kg/cm after 8000 h in 95° water or 3% salt solution, resp.

IT 60-00-4, EDTA, uses and miscellaneous 139-13-9,
Nitrilotriacetic acid

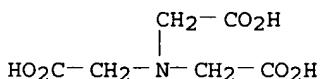
RL: USES (Uses)
(chelating agents, containing silane coupling agents, for treatment of steel for coating with polyolefins)

RN 60-00-4 HCAPLUS

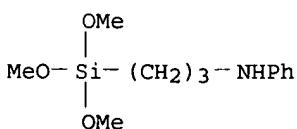
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 139-13-9 HCAPLUS
CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)

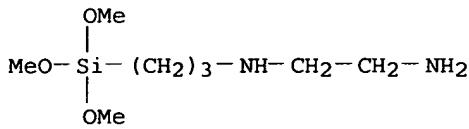


IT 3068-76-6
RL: USES (Uses)
(coupling agents, NZ 6083, containing chelating agents, for treatment of steel for coating with polyolefins)
RN 3068-76-6 HCAPLUS
CN Benzenamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

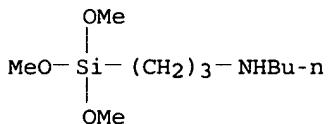


IT 1760-24-3, γ-(2-Aminoethyl)aminopropyltrimethoxysilane
31024-56-3 35141-30-1,
Trimethoxysilylpropyltriethylenetriamine
RL: USES (Uses)
(coupling agents, containing chelating agents, for treatment of steel

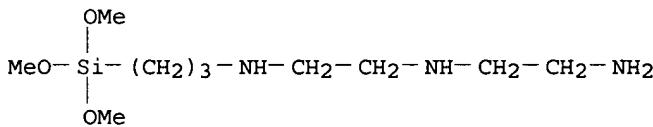
for coating with polyolefins)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 31024-56-3 HCPLUS
 CN 1-Butanamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



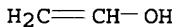
RN 35141-30-1 HCPLUS
 CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-(3-(trimethoxysilyl)propyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol)
 RL: USES (Uses)
 (reducing agents, for chromic anhydride, for chromating agents in
 coating of steel with polyolefins)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IC ICM B32B015-08
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 IT 60-00-4, EDTA, uses and miscellaneous 102-71-6, Triethanol
 amine, uses and miscellaneous 139-13-9, Nitrilotriacetic
 acid
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for treatment
 of steel for coating with polyolefins)
 IT 3068-76-6

RL: USES (Uses)
 (coupling agents, NZ 6083, containing chelating agents, for treatment of steel for coating with polyolefins)

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 2530-83-8, γ -Glycidoxypropyltrimethoxysilane
 31024-56-3 35141-30-1,
 Trimethoxysilylpropylideneetriamine 74113-77-2

RL: USES (Uses)
 (coupling agents, containing chelating agents, for treatment of steel for coating with polyolefins)

IT 87-66-1 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)
 (reducing agents, for chromic anhydride, for chromating agents in coating of steel with polyolefins)

L130 ANSWER 50 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN

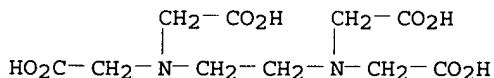
1988:114343 Document No. 108:114343 Surface treatment and coating of steel. Kayazono, Yoshihisa; Suzuki, Kazuyuki; Kato, Hirotada (Nippon Steel Corp., Japan). Jpn. Kokai Tokkyo Koho JP 62255139 A2 19871106 Showa, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-98272 19860430.

AB Steel is treated with a chromating agent layer containing silica dispersing agents, a layer of a condensation product of an alkoxy group-containing Ti, Zr, Al, or B compound with an alkoxy group-containing Si compound and a silanol-terminated di-Me siloxane, an alkylating agent-silane coupling agent mixed layer, and coated with organic polymers with good adhesion and corrosion resistance. Thus, steel was degreased, washed with acids, chromated, treated with a condensation product of hydrolyzed (EtO)₄Si and hydrolyzed (iso-PrO)₄Ti and silanol-terminated polydimethylsiloxane, treated with layer SZ 6083 (γ -anilinopropyltriethoxysilane-EDTA), and coated with a powdered epoxy coating.

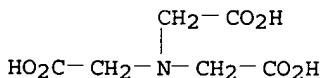
IT 60-00-4, EDTA, uses and miscellaneous 139-13-9,
 Nitrioltriacetic acid
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for coating steel)

RN 60-00-4 HCPLUS

CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 139-13-9 HCPLUS
 CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



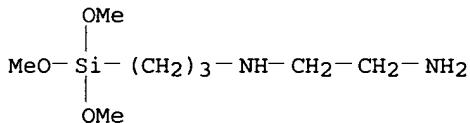
IT 9002-89-5D, Poly(vinyl alcohol), reaction products with chromic anhydride
 RL: USES (Uses)
 (chromating agents, containing silica dispersing agents, on steel)

RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

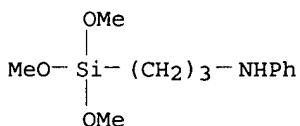
CM 1

CRN 557-75-5
CMF C2 H4 O

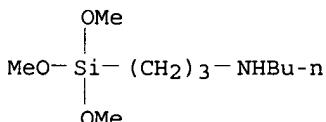
IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 3068-76-6, γ -Anilinopropyltrimethoxysilane
 31024-56-3, Butylaminopropyltrimethoxysilane
 103526-27-8
 RL: USES (Uses)
 (coupling agents, containing chelating agents, for coating of steel)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



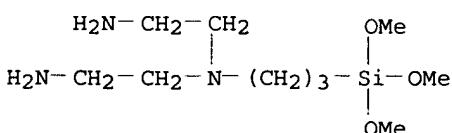
RN 3068-76-6 HCPLUS
 CN Benzenamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 31024-56-3 HCPLUS
 CN 1-Butanamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 103526-27-8 HCPLUS
 CN 1,2-Ethanediamine, N-(2-aminoethyl)-N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

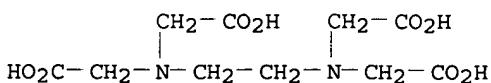


IC ICM B32B015-08
 ICS B05D007-14; B05D007-24
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 IT 60-00-4, EDTA, uses and miscellaneous 102-71-6,
 Triethanolamine, uses and miscellaneous 139-13-9,
 Nitrilotriacetic acid
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for coating
 steel)
 IT 1333-82-0D, Chromic anhydride, reaction products with poly(vinyl
 alc.) 9002-89-5D, Poly(vinyl alcohol), reaction products
 with chromic anhydride
 RL: USES (Uses)
 (chromating agents, containing silica dispersing agents, on steel)
 IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 2530-83-8, γ -Glycidoxypropyltrimethoxysilane 3068-76-6
 , γ -Anilinopropyltrimethoxysilane 31024-56-3,
 Butylaminopropyltrimethoxysilane 74113-77-2 103526-27-8
 RL: USES (Uses)
 (coupling agents, containing chelating agents, for coating of steel)

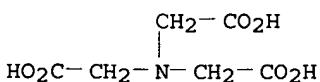
L130 ANSWER 51 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1988:114342 Document No. 108:114342 Surface treatment and coating of
 steel. Kayazono, Yoshihisa; Suzuki, Kazuyuki; Kato, Hirotada
 (Nippon Steel Corp., Japan). Jpn. Kokai Tokkyo Koho JP 62255138 A2
 19871106 Showa, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1986-98271 19860430.

AB Steel is treated with a chromating agent layer containing a silica
 dispersing agent, a polytitanocarbosilane layer, and a chelating
 agent-silane coupling agent mixed layer and coated with polymers
 with good adhesion and corrosion resistances. Thus, steel was
 degreased, blasted, chromated, treated with polytitanocarbosilane,
 treated with an SZ 6083 (γ -anilinopropyltrimethoxysilane)-ETDA
 mixture, and coated with an epoxy powder coating.

IT 60-00-4, EDTA, uses and miscellaneous 139-13-9,
 Nitrilotriacetic acid
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for
 undercoatings on steel)
 RN 60-00-4 HCPLUS
 CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX
 NAME)



RN 139-13-9 HCPLUS
 CN Glycine, N,N-bis(carboxymethyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5D, Poly(vinyl alcohol), reaction products with
 chromic anhydride
 RL: USES (Uses)

(chromating agents, containing silica dispersing agents, for steel)

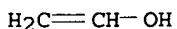
RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

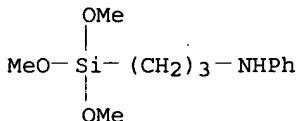
IT 3068-76-6, γ -Anilinopropyltrimethoxysilane

RL: USES (Uses)

(coupling agents, SZ 6083, containing chelating agents, undercoatings on steel)

RN 3068-76-6 HCPLUS

CN Benzenamine, N-[3-(trimethoxysilyl)propyl] - (9CI) (CA INDEX NAME)

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane

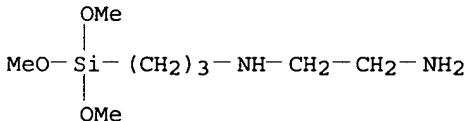
31024-56-3 103526-27-8

RL: USES (Uses)

(coupling agents, containing chelating agents, undercoatings on steel)

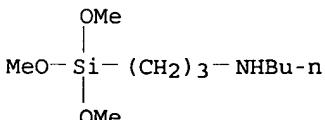
RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl] - (9CI) (CA INDEX NAME)



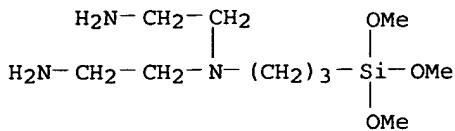
RN 31024-56-3 HCPLUS

CN 1-Butanamine, N-[3-(trimethoxysilyl)propyl] - (9CI) (CA INDEX NAME)



RN 103526-27-8 HCPLUS

CN 1,2-Ethanediamine, N-(2-aminoethyl)-N-[3-(trimethoxysilyl)propyl] - (9CI) (CA INDEX NAME)



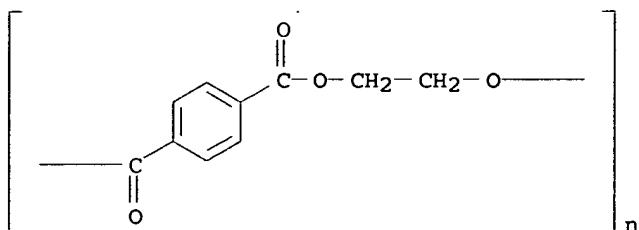
IC ICM B32B015-08
 ICS B05D007-14; B05D007-24
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 IT 60-00-4, EDTA, uses and miscellaneous 102-71-6,
 Triethanolamine, uses and miscellaneous 139-13-9,
 Nitrilotriacetic acid
 RL: USES (Uses)
 (chelating agents, containing silane coupling agents, for
 undercoatings on steel)
 IT 1333-82-0D, Chromic anhydride, reaction products with poly(vinyl
 alc.) 9002-89-5D, Poly(vinyl alcohol), reaction products
 with chromic anhydride
 RL: USES (Uses)
 (chromating agents, containing silica dispersing agents, for steel)
 IT 3068-76-6, γ -Anilinopropyltrimethoxysilane
 RL: USES (Uses)
 (coupling agents, SZ 6083, containing chelating agents, undercoatings
 on steel)
 IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
 2530-83-8, Glycidoxypropyltrimethoxysilane 31024-56-3
 74113-77-2 103526-27-8
 RL: USES (Uses)
 (coupling agents, containing chelating agents, undercoatings on
 steel)

L130 ANSWER 52 OF 52 HCPLUS COPYRIGHT 2005 ACS on STN
 1984:8100 Document No. 100:8100 Slippery biaxially stretched polyester
 films. Kanai, Tamaki; Yoshikawa, Hirofumi; Yamagishi, Takashi;
 Suzuki, Kenji; Ohta, Yoshikatsu (Teijin Ltd., Japan). Brit. UK
 Pat. Appl. GB 2113117 A1 19830803, 18 pp. (English). CODEN:
 BAXXDU. APPLICATION: GB 1982-9 19820112.

AB The title films are produced by coating the surface of a running
 film with a composition comprising metal (meth)acrylate which might have
 other anions, including O-containing ones, and film-forming polymers,
 monomers, or their mixture. The coating occurs before completion of
 the crystalline orientation of the film and results in the formation of
 numerous minute protrusions on the film surface upon heating. Thus,
 P-3 [Al₂(H₂C:CHCO₂)₃Cl₃] [63958-01-0] 60, Ti(H₂C:CHCO₂)₄
 [58197-49-2] 15, Poval A [poly(vinyl alc.)] [9002-89-5]
 10, DAG-206 (MoS₂) [1317-33-5] 5, and NS 208.5 (polyethylene glycol
 nonyl Ph ether) [9016-45-9] 10 parts were mixed in a homogenizer
 and then in an ultrasonic dispersing machine, followed by dilution in
 deionized water to make a 2%-solids coating. The coating was
 applied onto a monoaxially stretched poly(ethylene terephthalate) [
 25038-59-9] film by means of a 3-roll coater to the amount of
 .apprx.2.3 g/m² and, subsequently, set at 225° for 6.3 s
 after 3.5-fold transverse stretching of the film at 101°.
 Coated biaxially stretched film was wound under tension 9.8 kg and
 slit to 0.5 in-wide magnetic tape substrate without wrinkling or
 static charge buildup.

IT 25038-59-9, uses and miscellaneous
 RL: USES (Uses)
 (films, slippery, biaxially-stretched)

RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IT 9002-89-5 23779-32-0
 RL: USES (Uses)
 (slippery coatings containing, for biaxially-stretched polyester films)

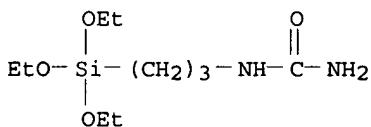
RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

H₂C=CH-OH

RN 23779-32-0 HCAPLUS
 CN Urea, [3-(triethoxysilyl)propyl]- (8CI, 9CI) (CA INDEX NAME)



IC B05D003-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42, 74, 77

IT 25038-59-9, uses and miscellaneous

RL: USES (Uses)
 (films, slippery, biaxially-stretched)

IT 1067-53-4 1317-33-5, uses and miscellaneous 5698-98-6
 9002-84-0 9002-89-5 9003-05-8 9003-08-1 9016-45-9
 13189-00-9 16809-88-4 23779-32-0 25322-68-3
 26403-72-5 58197-49-2 63958-01-0 86438-90-6 87139-72-8
 87928-43-6

RL: USES (Uses)
 (slippery coatings containing, for biaxially-stretched polyester films)

=> => d que stat 1157

L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9002-89-5/RN
 L4 641 SEA FILE=REGISTRY ABB=ON PLU=ON 9002-89-5/CRN

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L5      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  919-30-2/RN
L6      880 SEA FILE=REGISTRY ABB=ON  PLU=ON  919-30-2/CRN
L7      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  124-04-9/RN
L8      30821 SEA FILE=REGISTRY ABB=ON  PLU=ON  124-04-9/CRN
L9      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  85-44-9/RN
L10     10661 SEA FILE=REGISTRY ABB=ON  PLU=ON  85-44-9/CRN
L17     STR

```

5

O

}

N-^G1-^Si-^O
1 2 3 4

VAR G1=AK/CY
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE
L23 STR

O-^C-^G1-^C-^O
1 2 3 4 5

VAR G1=AK/CY
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

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L25      1040 SEA FILE=REGISTRY SSS FUL L17 AND L23
L33      2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L25 AND SRU
L34      12651 SEA FILE=REGISTRY SSS FUL L17
L36      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  557-75-5/RN
L37      571 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25
L38      2534 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36
L39      59641 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3
L41      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 AND L39
L44      23506 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34
L45      9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L44 AND L38
L46      411 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L44 AND L39
L47      5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33
L48      60705 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANTIMICROB? OR ANTI(A)MI
CROB?
L49      4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46 AND L48
L78     STR

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COOH 2 COOH 1

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE

L79 STR

C1—C=O C1—C=O
1 2 3 4 5 6

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L87 SCR 1841 OR 2016 OR 2021
L89 STR

O=C \ominus O \ominus C=O
1 2 3 4 5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L95 528365 SEA FILE=REGISTRY SSS FUL (L78 OR L79 OR L89) NOT L87
L96 170265 SEA FILE=REGISTRY ABB=ON PLU=ON L95 AND SEQ/FA
L97 358100 SEA FILE=REGISTRY ABB=ON PLU=ON L95 NOT L96
L98 4199 SEA FILE=REGISTRY ABB=ON PLU=ON 557-75-5/CRN
L107 358100 SEA FILE=REGISTRY ABB=ON PLU=ON L97 OR L97
L108 269999 SEA FILE=REGISTRY RAN=(69720-98-8,) ABB=ON PLU=ON L97
 OR L97
L109 88101 SEA FILE=REGISTRY ABB=ON PLU=ON L107 NOT L108
L110 90000 SEA FILE=REGISTRY RAN=(210432-44-3,) ABB=ON PLU=ON L97
 OR L97
L112 179999 SEA FILE=REGISTRY ABB=ON PLU=ON L107 NOT (L109 OR
 L110)
L113 90000 SEA FILE=REGISTRY RAN=(125260-19-7,) ABB=ON PLU=ON
 L107 NOT (L109 OR L110)
L114 89999 SEA FILE=REGISTRY ABB=ON PLU=ON L112 NOT L113
L115 707384 SEA FILE=HCAPLUS ABB=ON PLU=ON L109
L116 34736 SEA FILE=HCAPLUS ABB=ON PLU=ON L110
L117 48955 SEA FILE=HCAPLUS ABB=ON PLU=ON L113
L118 96628 SEA FILE=HCAPLUS ABB=ON PLU=ON L114
L119 134 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND ((L115 OR L116
 OR L117 OR L118))
L120 3540 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 AND ((L115 OR L116
 OR L117 OR L118))
L121 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L120 AND L36
L122 169 SEA FILE=HCAPLUS ABB=ON PLU=ON L120 AND L98
L123 134 SEA FILE=HCAPLUS ABB=ON PLU=ON L120 AND L3
L124 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L120 AND L4
L125 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L121 OR L124

L126 134 SEA FILE=HCAPLUS ABB=ON PLU=ON L119 OR L123
 L127 169 SEA FILE=HCAPLUS ABB=ON PLU=ON L126 OR L122
 L129 272659 SEA FILE=HCAPLUS ABB=ON PLU=ON INK?/SC, SX
 L130 52 SEA FILE=HCAPLUS ABB=ON PLU=ON L127 AND L129
 L131 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND ((L115 OR L116
 OR L117 OR L118))
 L132 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 AND ((L115 OR L116
 OR L117 OR L118))
 L133 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND ((L115 OR L116
 OR L117 OR L118))
 L134 1650 SEA FILE=HCAPLUS ABB=ON PLU=ON L4
 L135 9706 SEA FILE=HCAPLUS ABB=ON PLU=ON L5
 L136 734 SEA FILE=HCAPLUS ABB=ON PLU=ON L6
 L137 13329 SEA FILE=HCAPLUS ABB=ON PLU=ON L7
 L138 47424 SEA FILE=HCAPLUS ABB=ON PLU=ON L8
 L139 14297 SEA FILE=HCAPLUS ABB=ON PLU=ON L9
 L140 8588 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
 L141 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND L5
 L142 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L141 AND L39
 L145 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L141 AND L98
 L146 54 SEA FILE=HCAPLUS ABB=ON PLU=ON L135 AND L139
 L149 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L146 AND L136
 L150 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L146 AND L98
 L151 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L135 AND L137
 L152 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L151 AND (L38 OR L39 OR
 L134 OR L98)
 L153 72663 SEA FILE=HCAPLUS ABB=ON PLU=ON L98
 L154 5 SEA FILE=HCAPLUS ABB=ON PLU=ON (L135 OR L136) AND
 (L137 OR L138 OR L139 OR L140) AND (L39 OR L134 OR L38
 OR L153)
 L155 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L131 OR L132 OR L133 OR
 L142 OR L145 OR L149 OR L150 OR L152 OR L154
 L156 75 SEA FILE=HCAPLUS ABB=ON PLU=ON L130 OR L155 OR L125 OR
 L47 OR L49
 L157 23 SEA FILE=HCAPLUS ABB=ON PLU=ON L156 NOT L130

=> d l157 1-23 cbib abs hitstr hitind

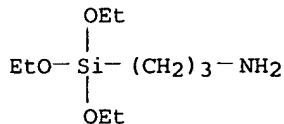
L157 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2005:641826 Document No. 143:156038 Methods of using sealants in
 multilateral junctions. Eoff, Larry S.; Everett, Don M. (USA).
 U.S. Pat. Appl. Publ. US 2005159319 A1 20050721, 14 pp. (English).
 CODEN: USXXCO. APPLICATION: US 2004-759676 20040116.

AB The present invention relates to the completion of subterranean well
 bores in a multilateral well system. More particularly, this
 invention relates to the sealing of junctions between lateral well
 bores and a parent well bore. The sealants used in accordance with
 the methods of the present invention generally comprise any sealing
 composition which can be placed within a reservoir, and injected a
 sufficient distance into a region of the formation surrounding a
 junction between a 1st well bore and a 2nd well bore in fluid
 communication with the 1st well bore, so as to prevent the undesired
 entry of formation fluids into either well bore in the region
 surrounding the junction.

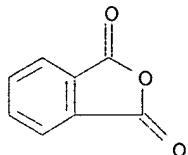
IT 919-30-2, γ -Aminopropyltriethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; methods of using polymer and copolymer sealants
 in multilateral junctions)

RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

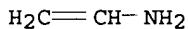


IT 85-44-9, Phthalic anhydride
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent);
 USES (Uses)
 (hardening agent; methods of using polymer and copolymer sealants
 in multilateral junctions)
 RN 85-44-9 HCPLUS
 CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)

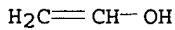


IT 29499-22-7, Vinylamine-vinyl alcohol copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (methods of using polymer and copolymer sealants in multilateral
 junctions)
 RN 29499-22-7 HCPLUS
 CN Ethenol, polymer with ethenamine (9CI) (CA INDEX NAME)

CM 1

CRN 593-67-9
CMF C2 H5 N

CM 2

CRN 557-75-5
CMF C2 H4 O

IC ICM E21B033-00
 INCL 507225000; 507219000; 507224000
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 38, 39
 IT 919-30-2, γ -Aminopropyltriethoxysilane 1760-24-3
 3069-24-7 35141-30-1 103526-27-8 860028-10-0
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; methods of using polymer and copolymer sealants
 in multilateral junctions)
 IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 76-03-9,
 Trichloroacetic acid, uses 79-52-7, 1,1,3-

Trichlorotrifluoroacetone 85-42-7, Hexahydrophthalic anhydride 85-44-9, Phthalic anhydride 88-95-9, 1,2-Benzenedicarbonyl dichloride 89-32-7, Pyromellitic dianhydride 98-07-7, Benzotrichloride 98-87-3, Benzal chloride 98-88-4, Benzoyl chloride 100-44-7, Benzyl chloride, uses 101-77-9, Diaminodiphenylmethane 103-83-3, Benzylidimethylamine 104-78-9 107-15-3, Ethylenediamine, uses 108-31-6, Maleic anhydride, uses 108-45-2, m-Phenylenediamine, uses 109-55-7 110-89-4, Piperidine, uses 111-40-0, Diethylenetriamine 112-24-3, Triethylenetetramine 116-16-5, Hexachloroacetone 140-31-8, 1-Piperazineethanamine 627-63-4, Fumaryl chloride 694-83-7, 1,2-Diaminocyclohexane 1477-55-0, 1,3-Benzenedimethanamine 2855-13-2, Isophorone diamine 7647-01-0, Hydrochloric acid, uses 9002-98-6D, derivs. 26444-72-4, (Tris(dimethylamino)methyl)phenol 26590-20-5, Methyltetrahydrophthalic anhydride 28299-33-4, Imidazoline 31307-24-1, Methylbicyclo-[2,2,1]-5-heptene-2,3-dicarboxylic anhydride 59516-66-4, Oxalic anhydride 860309-87-1 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(hardening agent; methods of using polymer and copolymer sealants in multilateral junctions)

IT 79-06-1D, Acrylamide, copolymers containing 79-10-7D, Acrylic acid, copolymers containing 79-39-0D, Methacrylamide, copolymers containing 79-41-4D, Methacrylic acid, copolymers containing 88-12-0D, acrylamide-containing and other copolymers containing 98-00-0D, Furfuryl alcohol, polymers containing 107-13-1D, Acrylonitrile, acrylamide-containing copolymers of 108-05-4D, Vinyl acetate, acrylamide-containing copolymers of 108-31-6D, Maleic anhydride, acrylamide-containing copolymers of 110-26-9D, Methylenebisacrylamide, copolymers containing 126-98-7D, Methyl acrylonitrile, acrylamide-containing copolymers of 818-61-1D, copolymers containing 868-77-9D, copolymers containing 923-02-4D, N-Hydroxymethylmethacrylamide, copolymers containing 924-42-5D, N-Hydroxymethylacrylamide, copolymers containing 1184-84-5D, Vinylsulfonic acid, copolymers containing 1746-03-8D, Vinylphosphonic acid, copolymers containing 2425-79-8D, 1,4-Butanediol diglycidyl ether, epoxy polymers containing 2680-03-7D, N-N-Dimethylacrylamide, copolymers containing 2867-47-2D, N,N-Dimethylaminoethyl methacrylate, copolymers containing 5165-97-9D, Sodium 2-acrylamido-2-methylpropanesulfonate, acrylamide-containing copolymers of 5205-93-6D, copolymers containing 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7440-47-3, Chromium, uses 7440-67-7, Zirconium, uses 8062-15-5, Lignosulfonate 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-65-1, Tragacanth 9003-05-8, Polyacrylamide 9003-05-8D, Polyacrylamide, partially hydrolyzed 9004-34-6, Cellulose, uses 9004-35-7 9004-62-0, Hydroxyethylcellulose 9005-25-8, Starch, uses 9005-32-7D, Alginic acid, salts 9011-05-6, Urea-formaldehyde copolymer 9012-36-6, Agarose 9012-76-4, Chitosan 9012-76-4D, Chitosan, oxidized 9012-76-4D, Chitosan, salts 11138-66-2D, Xanthan gum, salts 15214-89-8D, 2-Acrylamido-2-methylpropanesulfonic acid, copolymers containing 15731-80-3D, copolymers containing 17557-23-2D, epoxy polymers containing 17831-71-9D, Tetraethylene glycol diacrylate, copolymers containing 21838-63-1D, copolymers containing 25104-18-1, Polylysine 25736-86-1D, Polyethylene glycol monomethacrylate, copolymers containing 26403-58-7D, Polyethylene glycol monoacrylate, copolymers containing 26914-43-2D, Vinylbenzenesulfonic acid, acrylamide-containing copolymers of 28497-59-8D, copolymers containing 28961-43-5D, Ethoxylated trimethylolpropane triacrylate, copolymers containing 29499-22-7, Vinylamine-vinyl alcohol copolymer 39420-45-6D, Polypropylene glycol monomethacrylate, copolymers containing 39464-87-4,

Scleroglucan 40623-73-2, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid copolymer 45155-43-9D, copolymers containing 50858-51-0D, Polypropylene glycol monoacrylate, copolymers containing 50986-11-3D, copolymers containing 51157-15-4D, copolymers containing 51410-72-1D, copolymers containing 51728-26-8D, Ethoxylated pentaerythritol tetraacrylate, copolymers containing 52174-50-2D, Glycerol diacrylate, copolymers containing 52408-84-1D, Propoxylated glycerol triacrylate, copolymers containing 53879-54-2D, Propoxylated trimethylolpropane triacrylate, copolymers containing 53879-55-3D, Propoxylated pentaerythritol tetraacrylate, copolymers containing 73282-68-5 82727-34-2D, Ethoxylated trimethylol propane trimethacrylate, copolymers containing 83383-93-1 86629-01-8D, copolymers containing 87352-76-9D, copolymers containing 101661-95-4D, Ethoxylated glycerol triacrylate, copolymers containing 103534-15-2D, copolymers containing 106282-16-0D, copolymers containing 110933-72-7 136154-27-3D, Propoxylated trimethylolpropane trimethacrylate, copolymers containing 136403-66-2D, copolymers containing 142309-33-9D, copolymers containing 145611-81-0D, copolymers containing 146246-76-6D, epoxy polymers containing 147835-33-4D, copolymers containing 179267-59-5 521064-17-5D, copolymers containing 849099-98-5D, copolymers containing 853053-99-3D, copolymers containing 860309-84-8D, copolymers containing 860309-85-9D, copolymers containing 860309-86-0D, copolymers containing

RL: TEM (Technical or engineered material use); USES (Uses)
(methods of using polymer and copolymer sealants in multilateral junctions)

L157 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
2004:1014309 Document No. 142:30157 Curable compositions, antireflective films, polarizing sheets, and display devices. Kato, Eiichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004331744 A2 20041125, 54 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 2003-127263 20030502.

AB The compns. contain (A) ≥ 1 silyl-terminated polymer coupling compds. (R1O)3-aR2aSiXW (W = polyester repeating unit or radically polymerizable repeating unit with weight-average mol. weight 2000-20,000; X = divalent organic residue; R1 = aliphatic group, COR10; R10 = hydrocarbyl; R2 = hydrocarbyl; a = 0, 1) and (B) ≥ 1 silane coupling compds. In the antireflective films having high-refractive-index layers and low-refractive-index layers on transparent supports, the high-refractive-index layers are obtained by curing the compns. containing inorg. particles with $n \geq 1.70$. The polarizing sheets have the antireflective films as protective films of polarizing films. The antireflective films and the polarizing sheets are useful for plasma display panels, flat televisions, and liquid-crystal displays. The compns. give cured products with low curing shrinkage, good crack, curling, and scratch resistance, and high surface hardness.

IT 29089-13-2DP, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanediethanol copolymer, trimethoxysilyl-terminated, polymers with alkoxy silanes 693236-45-2DP, reaction products with 3-trimethoxysilylpropane isocyanate-3-methacryloyloxypropylmethyldimethoxysilane-methyltrimethoxysilane-pentaerythritol tetraacrylate-tetraethoxysilane copolymer 693236-62-3DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799269-51-5P 799269-55-9P 799269-56-0P 799269-57-1DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799775-69-2DP, trimethoxysilyl-terminated, polymers with alkoxy silanes
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

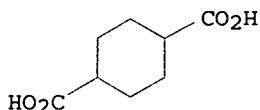
(coupling compound-containing curable compns. for antireflective films
of polarizing sheets of displays)

RN 29089-13-2 HCPLUS

CN 1,4-Cyclohexanedicarboxylic acid; polymer with 1,4-
cyclohexanediethanol (9CI) (CA INDEX NAME)

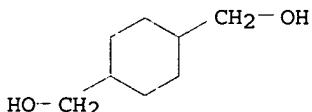
CM 1

CRN 1076-97-7
CMF C8 H12 O4



CM 2

CRN 105-08-8
CMF C8 H16 O2

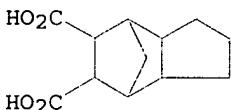


RN 693236-45-2 HCPLUS

CN 4,7-Methano-1H-indene-5,6-dicarboxylic acid, octahydro-, polymer
with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 168196-18-7
CMF C12 H16 O4



CM 2

CRN 629-11-8
CMF C6 H14 O2

HO—(CH₂)₆—OH

RN 693236-62-3 HCPLUS

CN Butanedioic acid, polymer with 2,2'—[(1-methylethylidene)bis(4,1-

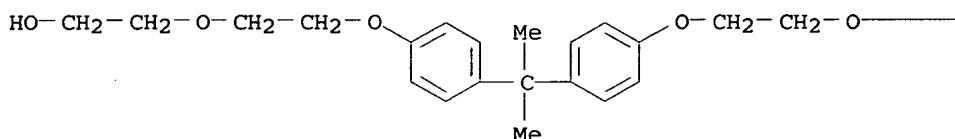
phenyleneoxy-2,1-ethanediyl)oxy)]bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 27697-57-0

CMF C23 H32 O6

PAGE 1-A



PAGE 1-B

—CH₂—CH₂—OH

CM 2

CRN 110-15-6

CMF C4 H6 O4

HO₂C—CH₂—CH₂—CO₂H

RN 799269-51-5 HCPLUS

CN Silicic acid (H₄SiO₄), tetraethyl ester, polymer with
 α -[4-[1-[4-[(12,12-dimethoxy-7-oxo-3,6,13-trioxa-8-aza-12-silatetradec-1-yl)oxy]cyclohexyl]-1-methylethyl]cyclohexyl]- ω -[2-[2-[(5-methoxy-1,5-dioxopentyl)oxylethoxy]ethoxy]poly[oxy-1,2-ethanediyl]oxy-1,2-ethanediyl]oxy-1,2-ethanediyl]oxy-1,4-cyclohexanediyl(1-methylethylidene)-1,4-cyclohexanediyl], 2,2'-[2-ethyl-2-[(oxiranylmethoxy)methyl]-1,3-propanediyl]bis(oxymethylene)]bis[oxiranane], trimethoxymethylsilane and trimethoxy(4-oxiranylbutyl)silane (9CI) (CA INDEX NAME)

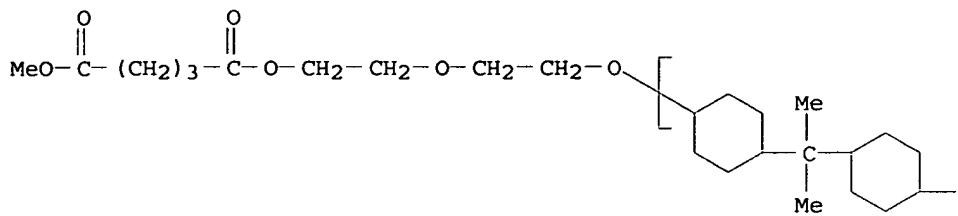
CM 1

CRN 799269-50-4

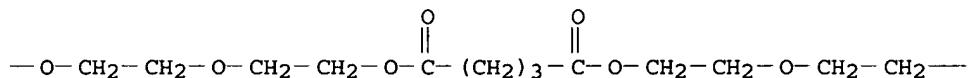
CMF (C₂₈ H₄₈ O₈)_n C₃₆ H₆₇ N O₁₃ Si

CCI PMS

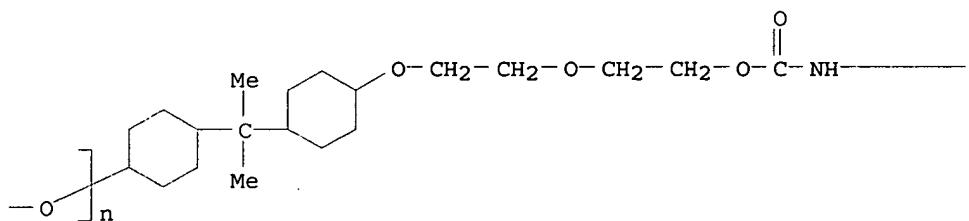
PAGE 1-A



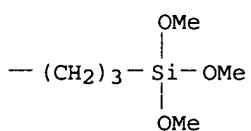
PAGE 1-B



PAGE 1-C

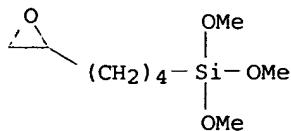


PAGE 1-D



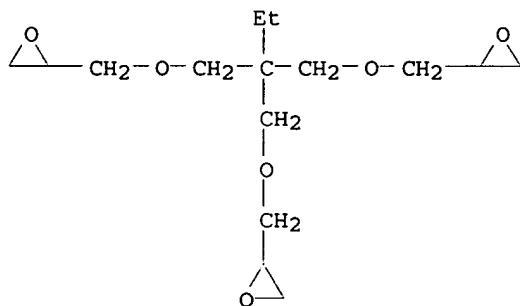
CM 2

CRN 51248-97-6
CMF C9 H20 O4 Si



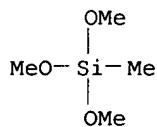
CM 3

CRN 3454-29-3
CMF C15 H26 06



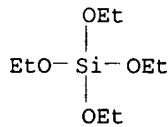
CM 4

CRN 1185-55-3
CMF C4 H12 O3 Si



CM 5

CRN 78-10-4
CMF C8 H20 O4 Si



RN 799269-55-9 HCAPLUS

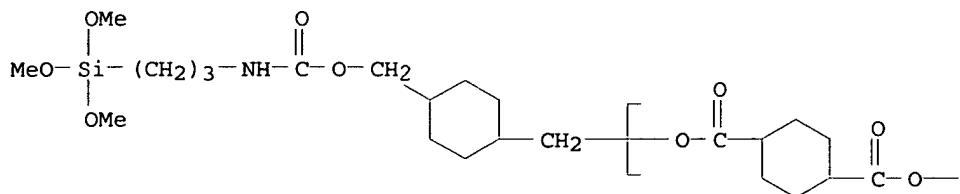
CN Silicic acid (H_4SiO_4), tetraethyl ester, polymer with α -[[4-(8,8-dimethoxy-3-oxo-2,9-dioxa-4-aza-8-siladec-1-yl)cyclohexyl]methyl]- ω -[[4-(methoxycarbonyl)cyclohexyl]carbonyloxy]poly(oxycarbonyl-1,4-cyclohexanediylcarbonyloxyethylene-1,4-

cyclohexanediylmethylen) and trimethoxymethylsilane (9CI) (CA INDEX NAME)

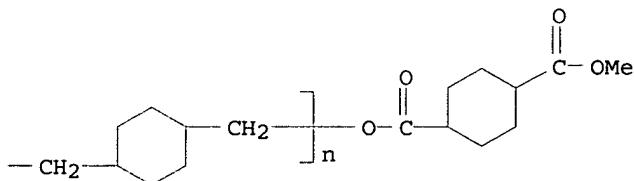
CM 1

CRN 799269-54-8
 CMF (C₁₆ H₂₄ O₄)_n C₂₄ H₄₃ N O₉ Si
 CCI PMS

PAGE 1-A

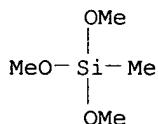


PAGE 1-B



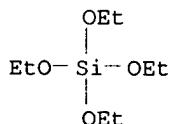
CM 2

CRN 1185-55-3
 CMF C₄ H₁₂ O₃ Si



CM 3

CRN 78-10-4
 CMF C₈ H₂₀ O₄ Si



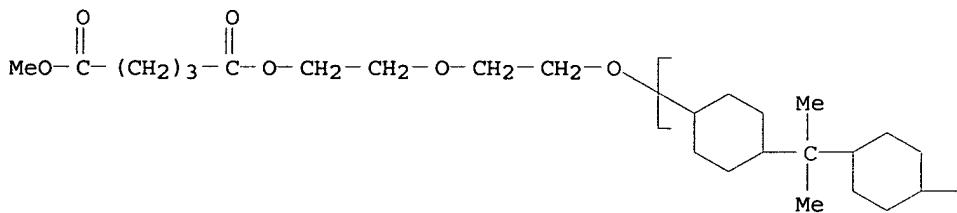
RN 799269-56-0 HCPLUS

CN Silicic acid (H_4SiO_4), tetraethyl ester, polymer with α -[4-[1-[4-[(12,12-dimethoxy-7-oxo-3,6,13-trioxa-8-aza-12-silatetradec-1-yl)oxylcyclohexyl]-1-methylethyl]cyclohexyl]- ω -[2-[2-[(5-methoxy-1,5-dioxopentyl)oxylethoxy]ethoxy]poly[oxy-1,2-ethanediyl]oxy-1,2-ethanediyl]oxy-1,2-ethanediyl]oxy-1,4-cyclohexanediyl(1-methylethylidene)-1,4-cyclohexanediyl] and trimethoxymethylsilane (9CI) (CA INDEX NAME)

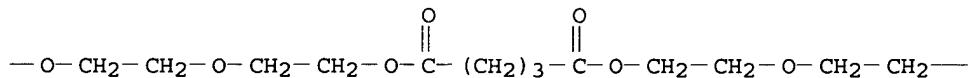
CM 1

CRN 799269-50-4
CMF (C₂₈ H₄₈ O₈)_n C₃₆ H₆₇ N O₁₃ Si
CCI PMS

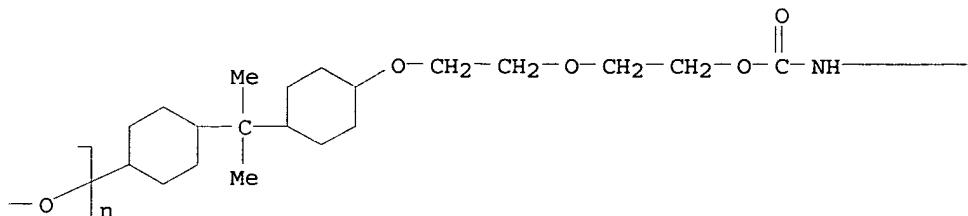
PAGE 1-A



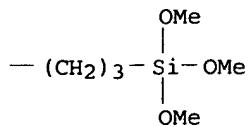
PAGE 1-B



PAGE 1-C

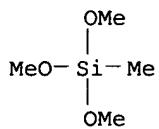


PAGE 1-D



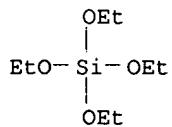
CM 2

CRN 1185-55-3
 CMF C4 H12 O3 Si



CM 3

CRN 78-10-4
 CMF C8 H20 O4 Si

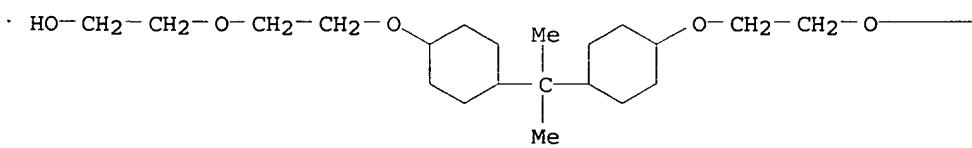


RN 799269-57-1 HCAPLUS
 CN Pentanedioic acid, polymer with 2,2'-(1-methylethylidene)bis(4,1-cyclohexanediyl)oxy-2,1-ethanediyl]bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 692778-71-5
 CMF C23 H44 O6

PAGE 1-A



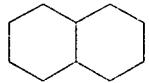
PAGE 1-B

—CH₂—CH₂—OH

CM 2

CRN 110-94-1
CMF C5 H8 O4HO₂C—(CH₂)₃—CO₂HRN 799775-69-2 HCAPLUS
CN Pentanedioic acid, polymer with decahydronaphthalenedimethanol (9CI)
(CA INDEX NAME)

CM 1

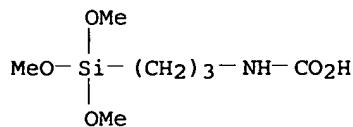
CRN 137077-42-0
CMF C12 H22 O2
CCI IDS2 [D1—CH₂—OH]

CM 2

CRN 110-94-1
CMF C5 H8 O4HO₂C—(CH₂)₃—CO₂HIT 781658-13-7P 781658-14-8P
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or
engineered material use); PREP (Preparation); RACT (Reactant or
reagent); USES (Uses)
(coupling compound-containing curable compns. for antireflective films
of polarizing sheets of displays)RN 781658-13-7 HCAPLUS
CN 4,7-Methano-1H-indene-5,6-dicarboxylic acid, octahydro-, polymer
with 1,6-hexanediol, mono[[3-(trimethoxysilyl)propyl]carbamate]
(9CI) (CA INDEX NAME)

CM 1

CRN 169542-35-2
CMF C7 H17 N O5 Si

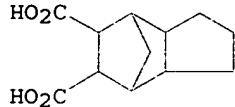


CM 2

CRN 693236-45-2
 CMF (C12 H16 O4 . C6 H14 O2)x
 CCI PMS

CM 3

CRN 168196-18-7
 CMF C12 H16 O4



CM 4

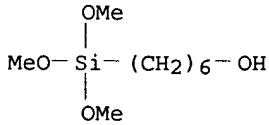
CRN 629-11-8
 CMF C6 H14 O2

HO-(CH₂)₆-OH

RN 781658-14-8 HCPLUS
 CN 2,5-Furandione, dihydro-, polymer with 1,4-cyclohexanedimethanol, mono[6-(trimethoxysilyl)hexyl] ester (9CI) (CA INDEX NAME)

CM 1

CRN 83123-17-5
 CMF C9 H22 O4 Si



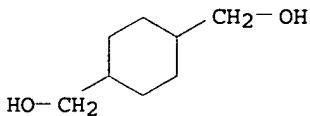
CM 2

CRN 693236-48-5
 CMF (C8 H16 O2 . C4 H4 O3)x
 CCI PMS

CM 3

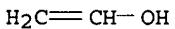
CRN 108-30-5
CMF C4 H4 O3

CM 4

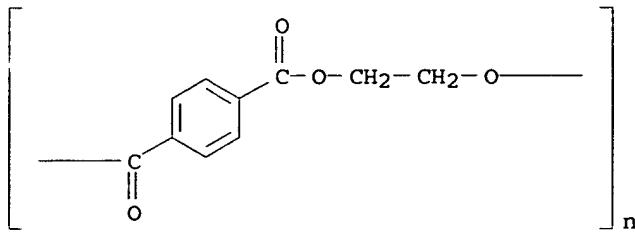
CRN 105-08-8
CMF C8 H16 O2

IT 9002-89-5, Poly(vinyl alcohol)
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (iodine-adsorbed, polarizers; coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

IT 25038-59-9, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (substrates; coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



IC ICM C08L101-10
 ICS B32B007-02; B32B027-00; C08K005-541; C09D167-00; C09D201-10;
 G02B001-10; G02B001-11; G02B005-30

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 73

IT 77-99-6DP, Trimethylolpropane, polymers with trimethoxysilyl-terminated polymers 78-10-4DP, Tetraethoxysilane, polymers with trimethoxysilyl-terminated polyesters 2031-67-6DP, Methyltriethoxysilane, polymers with trimethoxysilyl-terminated polyesters 2768-02-7DP, Vinyltrimethoxysilane, polymers with trimethoxysilyl-terminated polymers 3454-29-3DP, polymers with trimethoxysilyl-terminated polymers 4369-14-6DP, γ -Acryloyloxypropyltrimethoxysilane, polymers with alkoxy silanes 4369-14-6DP, 3-Acryloyloxypropyltrimethoxysilane, polymers with trimethoxysilyl-terminated polymers 15396-00-6DP, polymers with trimethoxysilyl-terminated polymers 26141-88-8DP, polymers with alkoxy silanes 29089-13-2DP, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol copolymer, trimethoxysilyl-terminated, polymers with alkoxy silanes 29570-58-9DP, DPHA, polymers with trimethoxysilyl-terminated polymers 51248-97-6DP, 5,6-Epoxyhexyltrimethoxysilane, polymers with trimethoxysilyl-terminated polymers 60506-81-2DP, Dipentaerythritol pentaacrylate, polymers with trimethoxysilyl-terminated polymers 65799-47-5DP, γ -Glycidoxypropylmethyldimethoxysilane, polymers with alkoxy silanes 119347-00-1DP, polymers with trimethoxysilyl-terminated polymers 160716-45-0P, KBM 5103 homopolymer 693236-45-2DP, reaction products with 3-trimethoxysilylpropane isocyanate-3-methacryloyloxypropylmethyldimethoxysilane-methyltrimethoxysilane-pentaerythritol tetraacrylate-tetraethoxysilane copolymer 693236-62-3DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799269-51-5P 799269-53-7P 799269-55-9P 799269-56-0P 799269-57-1DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799269-58-2DP, polymers with alkoxy silanes 799269-59-3P, KBM 5103-perfluorohexyltrimethoxysilane copolymer 799269-61-7P 799269-62-8DP, polymers with trimethoxysilyl-terminated polymers 799763-23-8DP, reaction products with 1,6-hexanediol-tricyclo[5.2.1.02,6]decane-8,9-dicarboxylic acid copolymer 799775-69-2DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799775-70-5DP, trimethoxysilyl-terminated, polymers with alkoxy silanes 799790-03-7P
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)

IT 4420-74-0DP, 3-Mercaptopropyltrimethoxysilane, reaction products with polyesters 27458-65-7DP, Cyclohexyl acrylate homopolymer,

trimethoxysilyl-terminated 83123-17-5DP, reaction products with hydroxy-terminated polymers 780784-53-4DP, reaction products with cyclohexyl acrylate polymer 781658-13-7P
 781658-14-8P 799775-68-1DP, trimethoxysilyl-terminated
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)

IT 9002-89-5, Poly(vinyl alcohol)
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (iodine-adsorbed, polarizers; coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)

IT 25038-59-9, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (substrates; coupling compound-containing curable compns. for antireflective films of polarizing sheets of displays)

L157 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2004:492245 Document No. 141:19163 Magnetic microbicide. Weide, Mirko; Stumpe, Stefan; Roth, Marcel; Lammerschop, Olaf; Stelter, Norbert; Heinzel, Michael; Breves, Roland (Henkel Kgaa, Germany). Ger. Offen. DE 10256085 A1 20040617, 19 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2002-10256085 20021129.

AB The invention concerns magnetic microbicides, prepared by covalent bonding of microbicides with magnetic components. Thus, aminosilane-modified magnetite is coupled with 4-hydroxybenzaldehyde to give a magnetic microbicide. The magnetic microbicides are used i.a. in sewage plants and fermenters, for laundry disinfection and for antimicrobial treatment of coolants and cooling lubricants as well as in neutral cleaners. The magnetic microbicides can be targeted or removed using a magnetic field.

IT 9002-89-5D, covalently coupled with microbicides
 RL: MOA (Modifier or additive use); USES (Uses)
 (magnetic beads; magnetic microbicides)

RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

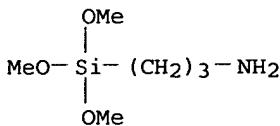
CM 1

CRN 557-75-5
 CMF C2 H4 O $\text{H}_2\text{C}\equiv\text{CH}-\text{OH}$

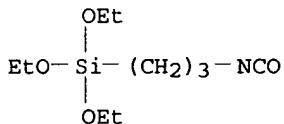
IT 13822-56-5D, Aminopropyltrimethoxysilane, magnetic particles modified with, microbicide-coupled 24801-88-5D, 3-Isocyanatopropyltriethoxysilane, magnetic particles modified with, microbicide-coupled 31024-46-1D, (3-N-Allylamino)propyltrimethoxysilane, magnetic particles modified with, microbicide-coupled 123145-67-5D, magnetic particles modified with, microbicide-coupled 123198-57-2D, N-(3-Acryloxy-2-hydroxypropyl)-3-aminopropyltriethoxysilane, magnetic particles modified with, microbicide-coupled
 RL: MOA (Modifier or additive use); USES (Uses)
 (magnetic microbicides)

RN 13822-56-5 HCAPLUS

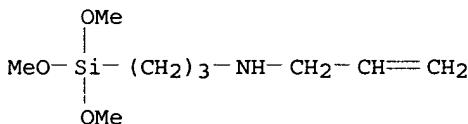
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



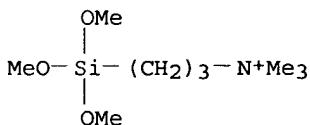
RN 24801-88-5 HCAPLUS
 CN Silane, triethoxy(3-isocyanatopropyl)- (9CI) (CA INDEX NAME)



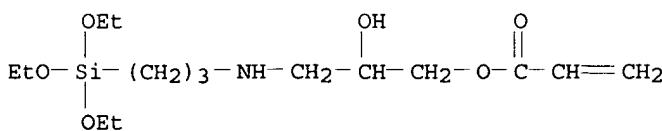
RN 31024-46-1 HCAPLUS
 CN 2-Propen-1-amine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 123145-67-5 HCAPLUS
 CN 1-Propanaminium, N,N,N-trimethyl-3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



RN 123198-57-2 HCAPLUS
 CN 2-Propenoic acid, 2-hydroxy-3-[[3-(triethoxysilyl)propyl]amino]propyl ester (9CI) (CA INDEX NAME)



IC ICM A01N025-08
 ICS A01N025-10
 CC 5-2 (Agrochemical Bioregulators)
 IT 9002-89-5D, covalently coupled with microbicides
 9003-01-4D, Polyacrylic acid, covalently coupled with microbicides

9003-05-8D, Polyacrylamide, covalently coupled with microbicides
 9003-53-6D, Polystyrene, covalently coupled with microbicides
 9011-14-7D, PMMA, covalently coupled with microbicides
 RL: MOA (Modifier or additive use); USES (Uses)
 (magnetic beads; magnetic microbicides)

IT 1309-38-2D, Magnetite, covalently coupled with microbicides
 2530-83-8D, Glycidoxypolytrimethoxysilane, magnetic particles
 modified with, microbicide-coupled 4369-14-6D,
 (3-Acryloxypropyl)trimethoxysilane, magnetic particles modified
 with, microbicide-coupled 7439-89-6D, Iron, covalently coupled
 with microbicides 12134-66-6D, Maghemite, covalently coupled with
 microbicides 13822-56-5D, Aminopropyltrimethoxysilane,
 magnetic particles modified with, microbicide-coupled 17070-70-1D,
 3-Isocyanatopropyltrimethoxysilane, magnetic particles modified
 with, microbicide-coupled 24801-88-5D,
 3-Isocyanatopropyltrimethoxysilane, magnetic particles modified with,
 microbicide-coupled 31024-46-1D, (3-N-
 Allylamino)propyltrimethoxysilane, magnetic particles modified
 with, microbicide-coupled 34390-22-2D,
 Aminophenyltrimethoxysilane, magnetic particles modified with,
 microbicide-coupled 59004-18-1D, Acetoxypropyltrimethoxysilane,
 magnetic particles modified with, microbicide-coupled 71550-63-5D,
 magnetic particles modified with, microbicide-coupled 71550-66-8D,
 magnetic particles modified with, microbicide-coupled
 111918-90-2D, magnetic particles modified with, microbicide-coupled
 123145-67-5D, magnetic particles modified with,
 microbicide-coupled 123198-57-2D, N-(3-Acryloxy-2-
 hydroxypropyl)-3-aminopropyltrimethoxysilane, magnetic particles
 modified with, microbicide-coupled 162781-70-6D,
 Hydroxymethyltrimethoxysilane, magnetic particles modified with,
 microbicide-coupled
 RL: MOA (Modifier or additive use); USES (Uses)
 (magnetic microbicides)

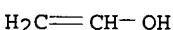
L157 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2004:17923 Document No. 140:60809 Starch-thermoplastic resin composite
 compositions and their moldings with excellent mechanical
 properties. Hishinuma, Minoru (Japan). Jpn. Kokai Tokkyo Koho JP
 2004002613 A2 20040108, 16 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 2002-221787 20020730. PRIORITY: JP 2001-337315
 20011102; JP 2002-109955 20020412; JP 2002-109956 20020412.

AB The compns., useful for cushion sheets, cups, and trays, contain
 thermoplastic resins, starch-type materials, and compatibilizers.
 Thus, a 45:40:5:3:7 corn starch-polypropylene-maleated
 polypropylene-urea-palm oil mixture was injection-molded into a test
 piece showing tensile strength at break 16.5 MPa and flexural
 modulus 2335 MPa.

IT 557-75-5D, Vinyl alcohol, polymers
 RL: POF (Polymer in formulation); TEM (Technical or engineered
 material use); USES (Uses)
 (biodegradable; starch-thermoplastic resin compns. containing
 acid-modified polyolefin compatibilizers for foam moldings with
 good mech. properties)

RN 557-75-5 HCAPLUS

CN Ethenol (9CI) (CA INDEX NAME)

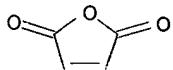


IT 108-31-6D, Maleic anhydride, reaction products with
 polypropylene

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (compatibilizer; starch-thermoplastic resin compns. containing acid-modified polyolefin compatibilizers for foam moldings with good mech. properties)

RN 108-31-6 HCPLUS

CN 2,5-Furandione (9CI) (CA INDEX NAME)

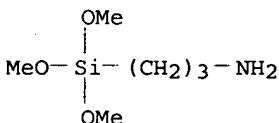


IT 13822-56-5, 3-Aminopropyltrimethoxysilane

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (coupling agent; starch-thermoplastic resin compns. containing acid-modified polyolefin compatibilizers for foam moldings with good mech. properties)

RN 13822-56-5 HCPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IC ICM C08L003-00

ICS C08J009-12; C08K005-00; C08L001-00; C08L005-00; C08L101-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 44

IT 557-75-5D, Vinyl alcohol, polymers

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (biodegradable; starch-thermoplastic resin compns. containing acid-modified polyolefin compatibilizers for foam moldings with good mech. properties)

IT 108-31-6D, Maleic anhydride, reaction products with polypropylene 9003-07-0D, Polypropylene, malated

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(compatibilizer; starch-thermoplastic resin compns. containing acid-modified polyolefin compatibilizers for foam moldings with good mech. properties)

IT 13822-56-5, 3-Aminopropyltrimethoxysilane

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(coupling agent; starch-thermoplastic resin compns. containing acid-modified polyolefin compatibilizers for foam moldings with good mech. properties)

L157 ANSWER 5 OF 23 HCPLUS COPYRIGHT 2005 ACS on STN

2003:926273 Document No. 140:375215 Reaction of organosilicon amines with dicarboxylic anhydrides. Kovyazin, V. A.; Nikitin, A. V.; Kopylov, V. M.; Sokol'skaya, I. B. (State Research Institute of Chemistry and Technology of Organometallic Compounds, Federal State Unitary Enterprise, Moscow, Russia). Russian Journal of General Chemistry (Translation of Zhurnal Obshchey Khimii), 73(7), 1072-1076

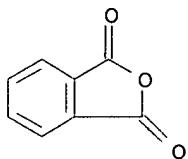
(English) 2003. CODEN: RJJCEK. ISSN: 1070-3632. OTHER SOURCES: CASREACT 140:375215. Publisher: MAIK Nauka/Interperiodica Publishing.

AB Organosilicon amines react with cyclic dicarboxylic anhydrides to form previously unknown amido acids, which are converted into ammonium salts by the reaction with an equimolar amount of the amine. The structures of the compds. were studied by NMR spectroscopy.

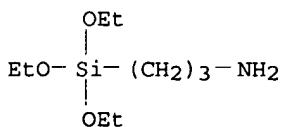
IT 85-44-9, Phthalic anhydride 919-30-2,
3-Aminopropyltriethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of amido acids by ring cleavage amidation of dicarboxylic anhydrides with silylalkylamines)

RN 85-44-9 HCPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



RN 919-30-2 HCPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

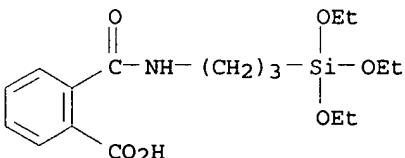


IT 125300-87-0P 622782-92-7P 683780-15-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of amido acids by ring cleavage amidation of dicarboxylic anhydrides with silylalkylamines)

RN 125300-87-0 HCPLUS
CN Benzoic acid, 2-[[[3-(triethoxysilyl)propyl]amino]carbonyl]-, compd. with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

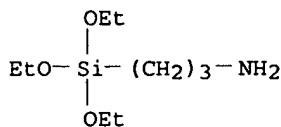
CM 1

CRN 34038-71-6
CMF C17 H27 N O6 Si



CM 2

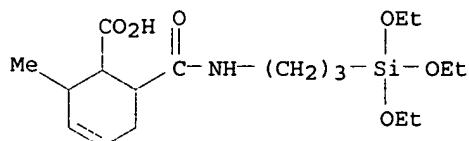
CRN 919-30-2
CMF C9 H23 N O3 Si



RN 622782-92-7 HCPLUS
 CN 3-Cyclohexene-1-carboxylic acid, 2-methyl-6-[[[3-(triethoxysilyl)propyl]amino]carbonyl]-, compd. with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

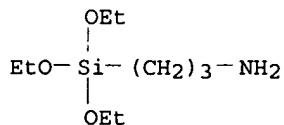
CM 1

CRN 622782-91-6
 CMF C18 H33 N O6 Si



CM 2

CRN 919-30-2
 CMF C9 H23 N O3 Si

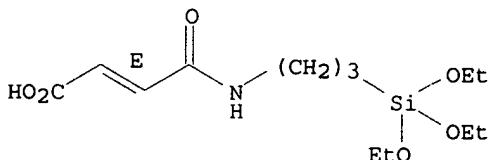


RN 683780-15-6 HCPLUS
 CN 2-Butenoic acid, 4-oxo-4-[[3-(triethoxysilyl)propyl]amino]-, (2E)-, compd. with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

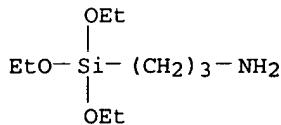
CM 1

CRN 683780-13-4
 CMF C13 H25 N O6 Si

Double bond geometry as shown.

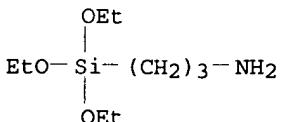


CM 2

CRN 919-30-2
CMF C9 H23 N O3 Si

CC 29-6 (Organometallic and Organometalloidal Compounds)
 IT 85-44-9, Phthalic anhydride 108-31-6, Maleic anhydride, reactions 919-30-2, 3-Aminopropyltriethoxysilane 1760-24-3 5333-84-6, 3-Methyl-1,2,3,6-tetrahydrophthalic anhydride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of amido acids by ring cleavage amidation of dicarboxylic anhydrides with silylalkylamines)
 IT 34038-71-6P 125300-87-0P 622782-91-6P
 622782-92-7P 683780-13-4P 683780-15-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of amido acids by ring cleavage amidation of dicarboxylic anhydrides with silylalkylamines)

L157 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2003:841058 Document No. 139:324572 Tire/rim assembly and expandable resin compositions. Teratani, Hiroyuki (Bridgestone Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2003306006 A2 20031028, 17 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-110714 20020412.
 AB The assembly contains a plurality of approx. spherical particles consisting of continuous resin phases and closed cells at the inside of the tire, wherein the filling volume of the particles is within specific upper and lower limits and adhesion inhibitors are placed around the particles. Thus, a tire using a butyl rubber composition as an inner liner rubber, particles prepared from an expandable resin composition containing polyacrylonitrile and 1,1,1,2-tetrafluoroethane, and Nipsil QA (silica particles) showed good ride comfort and long driving distance after puncture of the tire.
 IT 919-30-2, γ -Aminopropyltriethoxysilane
 RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (adhesion inhibitor; tire/rim assembly containing resin foam particles and adhesion inhibitors, with good puncture resistance and ride comfort)
 RN 919-30-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol) 24993-04-2, Amilan CM 6001
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(tire/rim assembly contg. resin foam particles and adhesion inhibitors, with good puncture resistance and ride comfort)

RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}\equiv\text{CH}-\text{OH}$

RN 24993-04-2 HCPLUS

CN Hexanedioic acid, polymer with hexahydro-2H-azepin-2-one and 1,6-hexanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 124-09-4

CMF C6 H16 N2

$\text{H}_2\text{N}-\text{(CH}_2\text{)}_6-\text{NH}_2$

CM 2

CRN 124-04-9

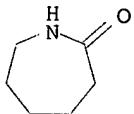
CMF C6 H10 O4

$\text{HO}_2\text{C}-\text{(CH}_2\text{)}_4-\text{CO}_2\text{H}$

CM 3

CRN 105-60-2

CMF C6 H11 N O



IC ICM B60C007-10

ICS B60C005-14; B60C017-06; B60C019-00; C08J009-04; C08L101-00

CC 39-13 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 38

IT 471-34-1, Calcium carbonate, uses 919-30-2,

γ -Aminopropyltriethoxysilane 7631-86-9, Nipsil AQ, uses

25322-68-3D, monoalkyl ethers 614722-35-9D, salts

RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(adhesion inhibitor; tire/rim assembly containing resin foam particles and adhesion inhibitors, with good puncture resistance

and ride comport)

IT 9002-89-5, Poly(vinyl alcohol) 9010-76-8,
 Acrylonitrile-vinylidene chloride copolymer 9010-80-4,
 Methacrylonitrile-vinylidene chloride copolymer 9011-14-7,
 Poly(methyl methacrylate) 24993-04-2, Amilan CM 6001
 25014-41-9, Polyacrylonitrile 25035-04-5, Rilsan BMNO
 25120-29-0, Methyl methacrylate-vinylidene chloride copolymer
 25214-39-5, Acrylonitrile-methyl methacrylate-vinylidene chloride
 copolymer 26813-25-2, Methacrylonitrile-methyl methacrylate
 copolymer 26813-83-2, Acrylonitrile-methacrylonitrile copolymer
 30396-85-1, Acrylonitrile-methyl methacrylate copolymer
 32335-23-2, Methacrylonitrile-methyl methacrylate-vinylidene
 chloride copolymer 38742-70-0, Acrylonitrile-methacrylonitrile-
 methyl methacrylate copolymer 52405-03-5, Acrylonitrile-
 methacrylonitrile-vinylidene chloride copolymer 371193-32-7,
 Acrylonitrile-methacrylonitrile-methyl methacrylate-vinylidene
 chloride copolymer
 RL: DEV (Device component use); TEM (Technical or engineered
 material use); USES (Uses)
 (tire/rim assembly containing resin foam particles and adhesion
 inhibitors, with good puncture resistance and ride comport)

L157 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2003:545342 Document No. 139:365698 Synthesis of adhesion promoters
 from organosilicon amines. Kovyazin, V. A.; Nikitin, A. V.;
 Kopylov, V. M.; Sokol'skaya, I. B. (Gos. Nauchno-Issled. Inst. Khim.
 Tekhnol. Elementoorg. Soedinenii, Russia). Khimicheskaya
 Promyshlennost Segodnya (6), 16-20 (Russian) 2003. CODEN: KPSHBN.
 Publisher: OOO "Khimprom Segodnya".

AB Amido acids and their ammonium salts were prepared by the reaction of
 Si-containing amines with maleic, phthalic, and 3-Methyl-1,2,3,6-
 tetrahydronaphthalic anhydrides. Amido acids and their salts can be
 used as adhesion promoters for mineral fillers in manufacture of glass
 fibers, glass fiber reinforced plastics, and other composite
 materials.

IT 125300-87-0P 622782-90-5P 622782-92-7P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (synthesis of adhesion promoters from organosilicon amines)

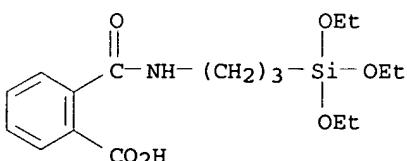
RN 125300-87-0 HCAPLUS

CN Benzoic acid, 2-[[[3-(triethoxysilyl)propyl]amino]carbonyl]-, compd.
 with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 34038-71-6

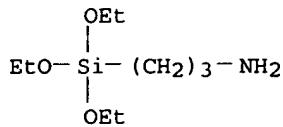
CMF C17 H27 N O6 Si



CM 2

CRN 919-30-2

CMF C9 H23 N O3 Si

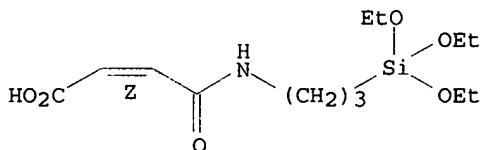


RN 622782-90-5 HCPLUS
 CN 2-Butenoic acid, 4-oxo-4-[[3-(triethoxysilyl)propyl]amino]-, (2Z)-,
 compd. with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX
 NAME)

CM 1

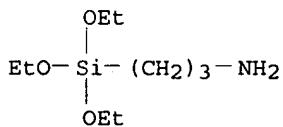
CRN 33525-68-7
 CMF C13 H25 N O6 Si

Double bond geometry as shown.



CM 2

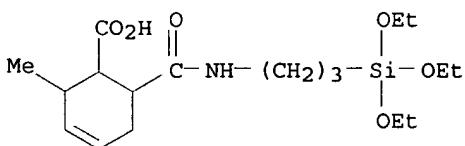
CRN 919-30-2
 CMF C9 H23 N O3 Si



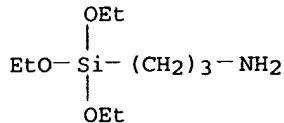
RN 622782-92-7 HCPLUS
 CN 3-Cyclohexene-1-carboxylic acid, 2-methyl-6-[[3-(triethoxysilyl)propyl]amino]carbonyl-, compd. with
 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

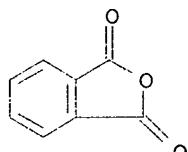
CRN 622782-91-6
 CMF C18 H33 N O6 Si



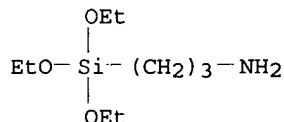
CM 2

CRN 919-30-2
CMF C9 H23 N O3 Si

IT 85-44-9, Phthalic anhydride 919-30-2,
3-Aminopropyltriethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of adhesion promoters from organosilicon amines)
RN 85-44-9 HCAPLUS
CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



RN 919-30-2 HCAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
IT 33525-68-7P 34038-71-6P 76149-04-7P 99503-88-5P
125300-87-0P 622782-90-5P 622782-91-6P
622782-92-7P 622782-93-8P 622782-94-9P 622782-95-0P
622782-96-1P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(synthesis of adhesion promoters from organosilicon amines)
IT 85-44-9, Phthalic anhydride 108-31-6, Maleic anhydride,
reactions 919-30-2, 3-Aminopropyltriethoxysilane
5333-84-6, 3-Methyl-1,2,3,6-tetrahydropthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of adhesion promoters from organosilicon amines)

L157 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
2003:454334 Document No. 139:37576 Basic silane coupling agent-organic
carboxylic acid salt composition, process for preparing the salt
composition and epoxy resin compositions containing the same.
Kumagai, Masashi; Ouchi, Takashi; Tsuchida, Katsuyuki (Nikko
Materials Co., Ltd., Japan). PCT Int. Appl. WO 2003048170 A1
20030612, 29 pp. DESIGNATED STATES: W: CA, CN, KR, US; RW: DE, ES,

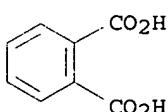
FR, GB, IT. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2002-JP8620 20020827. PRIORITY: JP 2001-374408 20011207; JP 2002-146196 20020521.

AB The title compns. are solid and have good storage stability. Thus, 0.2 mol imidazole was treated with 0.2 mol 3-glycidoxypropyltrimethoxysilane to give a product, treated (0.1 mol) with 0.1 mol pyromellitic acid, mixed with Phenolite TD 2093, and added to an epoxy resin.

IT 88-99-3DP, Phthalic acid, reaction products with amines and silane coupling agents 89-05-4DP, Pyromellitic acid, reaction products with amines and silane coupling agents 528-44-9DP, Trimellitic acid, reaction products with amines and silane coupling agents 540750-89-8P 540750-90-1P 540750-91-2P 540750-92-3P 540750-93-4P 540750-94-5P 540750-95-6P 540750-96-7P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
PREP (Preparation); USES (Uses)
(basic silane coupling agent-organic carboxylic acid salt compns.
for additives for epoxy resins)

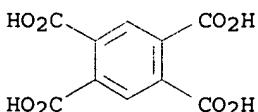
RN 88-99-3 HCPLUS

CN 1,2-Benzenedicarboxylic acid (9CI) (CA INDEX NAME)



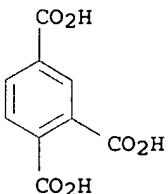
RN 89-05-4 HCPLUS

CN 1,2,4,5-Benzenetetracarboxylic acid (8CI, 9CI) (CA INDEX NAME)



RN 528-44-9 HCPLUS

CN 1,2,4-Benzenetricarboxylic acid (8CI, 9CI) (CA INDEX NAME)

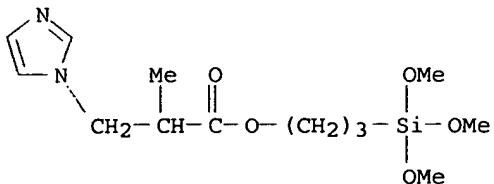


RN 540750-89-8 HCPLUS

CN 1,2,4,5-Benzenetetracarboxylic acid, compd. with 3-(trimethoxysilyl)propyl α -methyl-1H-imidazole-1-propanoate (1:1) (9CI) (CA INDEX NAME)

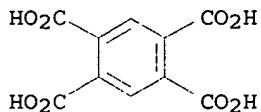
CM 1

CRN 301543-04-4
 CMF C13 H24 N2 O5 Si



CM 2

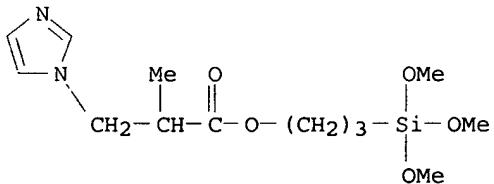
CRN 89-05-4
 CMF C10 H6 O8



RN 540750-90-1 HCPLUS
 CN 1,2,4-Benzenetricarboxylic acid, compd. with 3-(trimethoxysilyl)propyl α-methyl-1H-imidazole-1-propanoate
 (1:1) (9CI) (CA INDEX NAME)

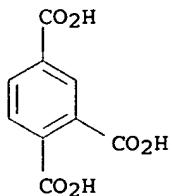
CM 1

CRN 301543-04-4
 CMF C13 H24 N2 O5 Si



CM 2

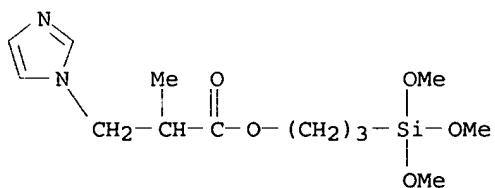
CRN 528-44-9
 CMF C9 H6 O6



RN 540750-91-2 HCPLUS
 CN 1,2-Benzenedicarboxylic acid, compd. with 3-(trimethoxysilyl)propyl
 α -methyl-1H-imidazole-1-propanoate (1:1) (9CI) (CA INDEX
 NAME)

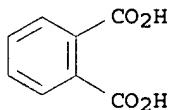
CM 1

CRN 301543-04-4
 CMF C13 H24 N2 O5 Si



CM 2

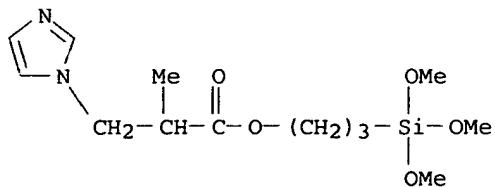
CRN 88-99-3
 CMF C8 H6 O4



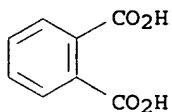
RN 540750-92-3 HCPLUS
 CN 1,2-Benzenedicarboxylic acid, compd. with 3-(trimethoxysilyl)propyl
 α -methyl-1H-imidazole-1-propanoate (1:2) (9CI) (CA INDEX
 NAME)

CM 1

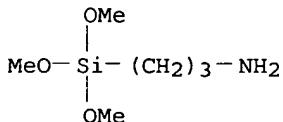
CRN 301543-04-4
 CMF C13 H24 N2 O5 Si



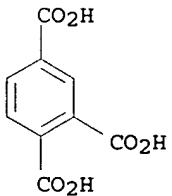
CM 2

CRN 88-99-3
CMF C8 H6 O4RN 540750-93-4 HCPLUS
CN 1,2,4-Benzenetricarboxylic acid, compd. with 3-(trimethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

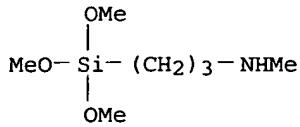
CM 1

CRN 13822-56-5
CMF C6 H17 N O3 Si

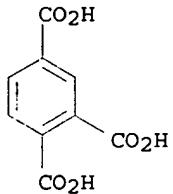
CM 2

CRN 528-44-9
CMF C9 H6 O6RN 540750-94-5 HCPLUS
CN 1,2,4-Benzenetricarboxylic acid, compd. with N-methyl-3-(trimethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

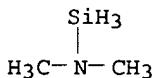
CRN 3069-25-8
CMF C7 H19 N O3 Si

CM 2

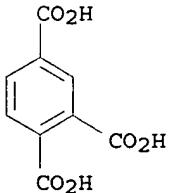
CRN 528-44-9
CMF C9 H6 O6

RN 540750-95-6 HCPLUS
 CN 1,2,4-Benzenetricarboxylic acid, compd. with N,N-dimethylsilanamine
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 2875-98-1
CMF C2 H9 N Si

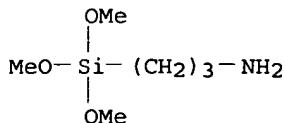
CM 2

CRN 528-44-9
CMF C9 H6 O6

RN 540750-96-7 HCPLUS
 CN 1,2,4-Benzenetricarboxylic acid, compd. with 3-(trimethoxysilyl)-1-propanamine (1:3) (9CI) (CA INDEX NAME)

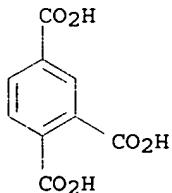
CM 1

CRN 13822-56-5
 CMF C6 H17 N O3 Si



CM 2

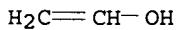
CRN 528-44-9
 CMF C9 H6 O6



IT 9002-89-5, Poly(vinyl alcohol)
 RL: MOA (Modifier or additive use); POF (Polymer in formulation);
 USES (Uses)
 (basic silane coupling agent-organic carboxylic acid salt compns.
 for additives for epoxy resins)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IC ICM C07F007-18
 ICS C08G059-40; C08L063-00
 CC 38-3 (Plastics Fabrication and Uses)
 IT 88-99-3DP, Phthalic acid, reaction products with amines and
 silane coupling agents 89-05-4DP, Pyromellitic acid,
 reaction products with amines and silane coupling agents
 288-32-4DP, Imidazole, reaction products with carboxylic acids and
 silane coupling agents 528-44-9DP, Trimellitic acid,
 reaction products with amines and silane coupling agents
 2530-83-8DP, 3-Glycidoxypropyltrimethoxysilane, reaction products
 with amines and carboxylic acids 540750-89-8P

540750-90-1P 540750-91-2P 540750-92-3P
 540750-93-4P 540750-94-5P 540750-95-6P

540750-96-7P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
 PREP (Preparation); USES (Uses)

(basic silane coupling agent-organic carboxylic acid salt compns.
 for additives for epoxy resins)

IT 868-77-9D, 2-Hydroxyethyl methacrylate, polymers 9002-89-5
 , Poly(vinyl alcohol) 9003-08-1, Melamine resin 25067-34-9,
 Ethylene vinyl alcohol copolymer 26970-31-0, Nylon 10
 32311-19-6, Formaldehyde-hexamethylenetetraamine-urea copolymer
 253336-55-9, Aminopropyltrimethoxysilane-methyltrimethoxysilane
 copolymer

RL: MOA (Modifier or additive use); POF (Polymer in formulation);
 USES (Uses)

(basic silane coupling agent-organic carboxylic acid salt compns.
 for additives for epoxy resins)

L157 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

2002:592369 Document No. 137:161341 Toner-cleaning device for org.
 electrophotog. photoreceptor having siloxane-based polymer surface
 layer. Itami, Akihiko; Sakimura, Tomoko; Sato, Kazuhiko (Konica
 Co., Japan). Jpn. Kokai Tokkyo Koho JP 2002221886 A2 20020809, 40
 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-19640
 20010129.

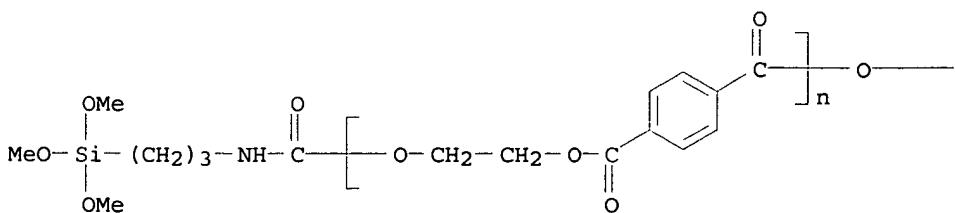
AB The invention relates to a toner-cleaning device for cleaning a
 polymer toner remained on an organic electrophotog. photoreceptor
 having a siloxane-based polymer surface layer, wherein (a) the
 surface layer is made of a siloxane condensation product alternately
 linked with an organic polymer and (b) an average value (Y0) of dynamic
 torque generated between the cleaning blade and the organic
 photoreceptor when a toner image is not formed and that (Y100) when
 a completely black toner image is formed have the following
 relations: $0.2 \geq Y100 - Y0 \geq 0.01$ and
 $2.95 \geq Y100/Y0 \geq 1.15$. The siloxane condensation product
 may contain a charge-transporting group. The organic polymer may
 include polycarbonate, polyarylate, and polyester. The image
 forming apparatus using above photoreceptor was able to form excellent
 images for a long time.

IT 444167-49-1P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (toner-cleaning device for organic electrophotog. photoreceptor
 having siloxane-based polymer surface layer)

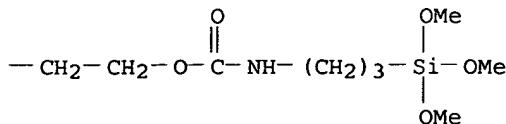
RN 444167-49-1 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl),
 α -[[[3-(trimethoxysilyl)propyl]amino]carbonyl]- ω -[2-
 [[[3-(trimethoxysilyl)propyl]amino]carbonyl]oxy]ethoxy] - (9CI) (CA
 INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03G021-10
IC S G03G005-07; G03G005-147; G03G009-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 35, 38, 42
IT 280131-33-1P 280760-74-9P 444167-49-1P 444171-35-1P
444171-37-3P 444559-61-9P
RL: SPN (Synthetic preparation); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(toner-cleaning device for organic electrophotog. photoreceptor
having siloxane-based polymer surface layer)

L157 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
2002:592368 Document No. 137:161340 Toner-cleaning device for organic
electrophotographic photoreceptor having siloxane-based polymer
surface layer. Itami, Akihiko; Sakimura, Tomoko; Sato, Kazuhiko
(Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2002221882 A2
20020809, 41 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
2001-15802 20010124.

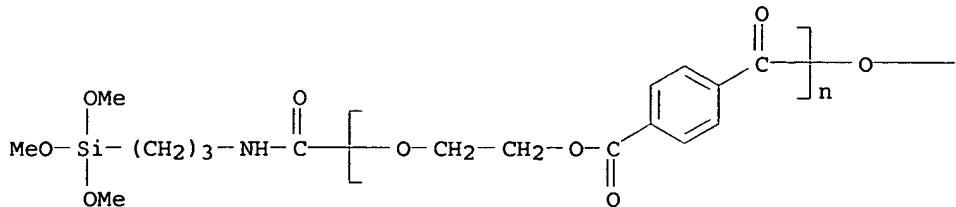
AB The invention relates to a toner-cleaning device for cleaning a toner remained on an organic electrophotog. photoreceptor having a siloxane-based polymer surface layer, wherein the toner-cleaning device is constituted in such a manner that a fluctuation of a dynamic torque value of a vibration with a frequency 10 Hz- 10kHz generated between the photoreceptor and a cleaning blade satisfies a certain relationship which is derived from the maximum and min. dynamic torque values over 12 min. The siloxane-based polymer is made up of alternately linked siloxane condensation product and an organic polymer such as polycarbonate, polyester, and polyarylate. The toner-cleaning device was able to maintain the cleaning performance for a long time without forming image defects.

IT 444167-49-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(toner-cleaning device for organic electrophotog. photoreceptor having siloxane-based polymer surface layer)

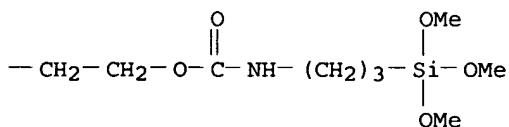
RN 444167-49-1 HCAPLUS

CN Poly(oxo-1,2-ethanediyl oxy carbonyl-1,4-phenylene carbonyl),
α-[[[3-(trimethoxysilyl)propyl]amino]carbonyl]-ω-[2-
[[[3-(trimethoxysilyl)propyl]amino]carbonyl]oxy]ethoxy] - (9CI) (CA
INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03G021-10

ICS G03G005-07; G03G005-147; G03G009-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 42

IT 280131-33-1P 280760-74-9P 444167-49-1P 444171-35-1P

444171-37-3P 444559-61-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(toner-cleaning device for organic electrophotog. photoreceptor having siloxane-based polymer surface layer)

L157 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

2002:592366 Document No. 137:161339 Method and apparatus for forming image using organic electrophotographic photoreceptor having siloxane-based surface layer. Itami, Akihiko; Sakimura, Tomoko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2002221860 A2 20020809, 27 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-16936 20010125.

AB The process uses an organic electrophotog. photoreceptor, wherein the photoreceptor has a surface layer which is made of a resin consisting of alternately linked an organic polymer and a siloxane condensation product and a distance (Dsd in μm) between a developer support and the photoreceptor and a film thickness of the surface layer have the following relation: $35 + a + 400 < Dsd < 800$ (a = film thickness of surface layer). The siloxane condensation product contains a charge-transporting group. The organic polymer includes polyester, polycarbonate, and polyarylate. The use of the siloxane group-containing polymer in the surface layer provided excellent halftone images and letter reproducibility.

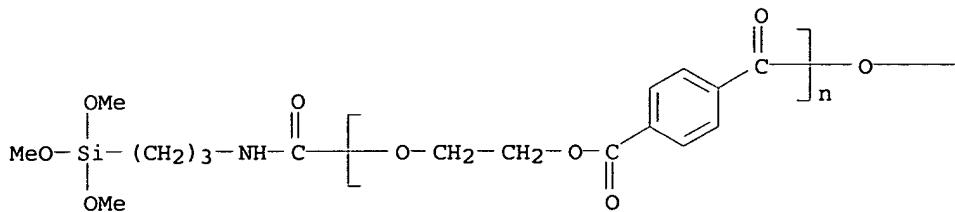
IT 444167-49-1P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electrophotog. photoreceptor having siloxane-based surface layer)

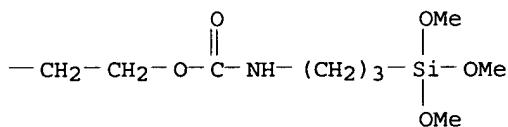
RN 444167-49-1 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl), α -[[[3-(trimethoxysilyl)propyl]amino]carbonyl]- ω -[2-[[[[3-(trimethoxysilyl)propyl]amino]carbonyl]oxy]ethoxy] - (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03G015-08

ICS G03G005-07; G03G005-147; G03G015-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 42

IT 280131-33-1P 280760-74-9P 444167-49-1P 444171-35-1P
444171-37-3P 444559-61-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(organic electrophotog. photoreceptor having siloxane-based surface layer)

L157 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

2002:568428 Document No. 137:147723 Electrophotographic photoreceptor having specific resin layer for process cartridge of electrophotographic image-forming apparatus, method for manufacture of thereof, and method image formation using the same. Sakimura, Tomoko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2002214814 A2 20020731, 31 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-13039 20010122.

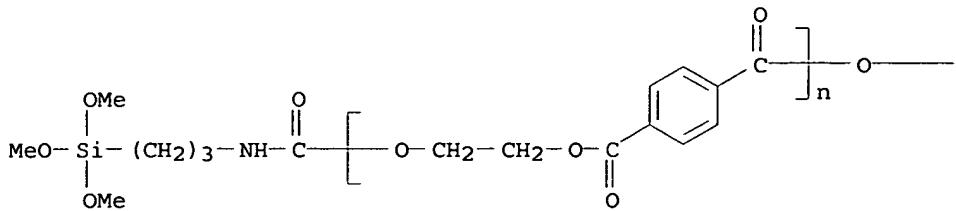
AB The title photoreceptor has a resin layer on an electroconductive support, wherein the resin layer is made of a resin modified with metal alkoxide at terminal groups of the main chain. The photoreceptor provides the improved wearing resistance of devices such as residual toner-cleaning blade.

IT 444167-49-1P, Elitel UE 3300, SRU, diester with (3-Isocyanatopropyl)triethoxysilane
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(electrophotog. photoreceptor for process cartridge of electrophotog. image-forming apparatus, method for manufacture of thereof, and method image formation using same)

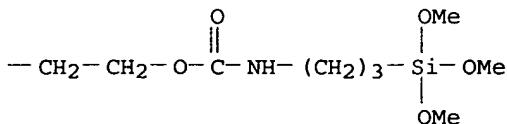
RN 444167-49-1 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylene carbonyl), α -[[3-(trimethoxysilyl)propyl]amino]carbonyl]- ω -[2-[[[[3-(trimethoxysilyl)propyl]amino]carbonyl]oxy]ethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03G005-147

ICS G03G005-147; G03G005-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

IT 24936-68-3DP, diether with Glycidoxypropyltrimethoxysilane
 25037-45-0DP, diether with Glycidoxypropyltrimethoxysilane
 25135-52-8DP, Iupilon Z 200, diether with hydroxypropyltriethoxysilane 26471-16-9DP, diether with hydroxypropyltriethoxysilane 280131-33-1P 280760-74-9P, Iupilon E 2000F diester with (3-Isocyanatopropyl)triethoxysilane 444167-48-0P 444167-49-1P, Elitel UE 3300, SRU, diester with (3-Isocyanatopropyl)triethoxysilane 444171-35-1P, Elitel UE 3300 diester with (3-isocyanatopropyl)triethoxysilane 444171-36-2P, Iupilon Z 200 diester with (3-Isocyanatopropyl)triethoxysilane 444171-37-3P, U-Polymer U 100 diester with (3-isocyanatopropyl)triethoxysilane 444559-61-9P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

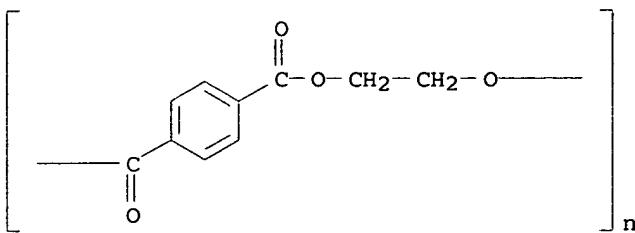
(electrophotog. photoreceptor for process cartridge of electrophotog. image-forming apparatus, method for manufacture of thereof, and method image formation using same)

L157 ANSWER 13 OF 23 HCPLUS COPYRIGHT 2005 ACS on STN

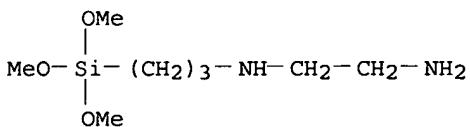
2001:663546 Document No. 135:227881 Polyester release films without bleeding oligomers. Isaki, Kimihiro (Mitsubishi Chemical Polyester Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001246698 A2 20010911, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-62932 20000308.

AB The films comprise a polyester film laminated with a coating layer and release layer having residual adhesion ratio $\geq 80\%$, wherein the coating and/or the release layer contain amino group-containing compds. and satisfy the relationship of $OL \leq 3.0$ and $N + Wf \geq 0.5$, where OL is amount of oligomer (mg/m^2) extracted with DMF from the release layer at 180° for 10 min, N is N content (ppm) from the release film by indophenol blue spectrometry via Kjeldahl decomposition, and Wf is weight per unit area of the release film (mg/m^2). Thus a di-Me terephthalate-ethylene glycol copolymer film was successively coated with a composition containing 90% N- β -(aminoethyl)- γ -aminopropyltrimethoxysilane and 10% PVA and a composition containing 100 parts curable silicone (KS 847H) and

IT 1 part curing agent (PL 50T) showed peeling strength 14 mN/cm.
 25038-59-9P, Dimethyl terephthalate-ethylene glycol
 copolymer, uses
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (polyester release films without bleeding oligomers)
 RN 25038-59-9 HCPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IT 1760-24-3, N-β-(Aminoethyl)-γ-
 aminopropyltrimethoxysilane 3068-76-6,
 N-Phenyl-γ-aminopropyltrimethoxysilane 3069-29-2,
 N-β-(Aminoethyl)-γ-aminopropylmethyldimethoxysilane
 5089-72-5, N-β-(Aminoethyl)-γ-
 aminopropyltriethoxysilane 13822-56-5,
 γ-Aminopropyltrimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyester release films without bleeding oligomers)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX
 NAME)

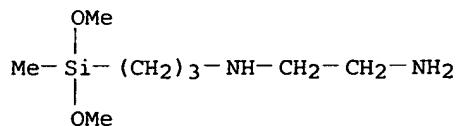


RN 3068-76-6 HCPLUS
 CN Benzenamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

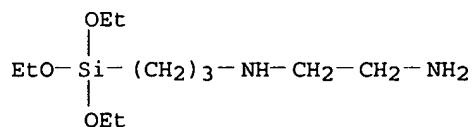
OMe
 MeO—Si—(CH₂)₃—NH—CH₂—CH₂—NH₂
 OMe

OMe
 MeO—Si—(CH₂)₃—NHPh
 OMe

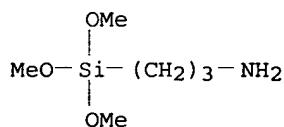
RN 3069-29-2 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA
 INDEX NAME)



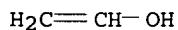
RN 5089-72-5 HCAPLUS
 CN 1,2-Ethanediamine, N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 13822-56-5 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



IT 557-75-5D, Vinyl alcohol, polymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polyester release films without bleeding oligomers)
 RN 557-75-5 HCAPLUS
 CN Ethenol (9CI) (CA INDEX NAME)



IC ICM B32B027-00
 ICS B32B027-36; C09D005-20; C09D183-08
 CC 38-3 (Plastics Fabrication and Uses)
 IT 25038-59-9P, Dimethyl terephthalate-ethylene glycol copolymer, uses
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester release films without bleeding oligomers)
 IT 1760-24-3, N- β -(Aminoethyl)- γ -aminopropyltrimethoxysilane 3068-76-6,
 N-Phenyl- γ -aminopropyltrimethoxysilane 3069-29-2,
 N- β -(Aminoethyl)- γ -aminopropylmethyldimethoxysilane
 5089-72-5, N- β -(Aminoethyl)- γ -aminopropyltrimethoxysilane 13822-56-5,
 γ -Aminopropyltrimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyester release films without bleeding oligomers)
 IT 557-75-5D, Vinyl alcohol, polymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polyester release films without bleeding oligomers)

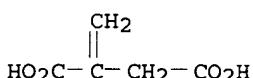
L157 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 2001:300467 Document No. 134:315913 Method for improving the stay-on properties of cosmetic compositions. Quinn, Francis Xavier; Giustiniani, Pascal; Jeanne-Rose, Valerie (L'Oreal, Fr.). PCT Int. Appl. WO 2001028504 A1 20010426, 26 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION: WO 2000-FR2732 20001003. PRIORITY: FR 1999-13140 19991021.

AB The invention relates to a method for improving the stay-on and/or brightness properties of a cosmetic composition for applying to the skin, lips or skin appendages. The method consists of incorporating in the composition or applying to the same a cross-linked organo-mineral hybrid material obtained by sol-gel means from a mixture containing the following: (A) at least one metallic or metallo-organic compound, (B) at least one functionalized organic polymer or a precursor thereof, or at least one functionalized siliconized polymer or a precursor thereof, the latter being different from (A). A non-transferable cosmetic foundation contained ethoxylated polydimethyl siloxane 18.7, parleam oil 8.5, tetra-Pr zirconate in 70% propanol 28.1, wax 2 g.

IT 97-65-4D, Itaconic acid, polymers 110-16-7D, Maleic acid, polymers 557-75-5D, Vinyl alcohol, polymers 919-30-2, 3-Aminopropyltriethoxysilane 25119-64-6, Itaconic acid homopolymer 26099-09-2, Maleic acid homopolymer
 RL: BUU (Biological use, unclassified); BIOL (Biological study);
 USES (Uses)
 (method for improving stay-on properties of cosmetic compns.)

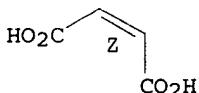
RN 97-65-4 HCAPLUS

CN Butanedioic acid, methylene- (9CI) (CA INDEX NAME)

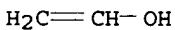


RN 110-16-7 HCAPLUS
 CN 2-Butenedioic acid (2Z)- (9CI) (CA INDEX NAME)

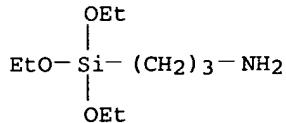
Double bond geometry as shown.



RN 557-75-5 HCAPLUS
 CN Ethenol (9CI) (CA INDEX NAME)



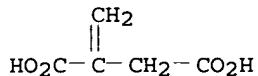
RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 25119-64-6 HCPLUS
 CN Butanedioic acid, methylene-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 97-65-4
 CMF C5 H6 O4

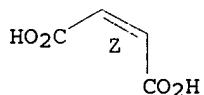


RN 26099-09-2 HCPLUS
 CN 2-Butenedioic acid (2Z)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 110-16-7
 CMF C4 H4 O4

Double bond geometry as shown.



IC ICM A61K007-02
 CC 62-4 (Essential Oils and Cosmetics)
 IT 78-10-4, Tetraethoxysilane 97-65-4D, Itaconic acid, polymers 110-16-7D, Maleic acid, polymers 546-68-9, Tetra-iso-propyl orthotitanate 557-75-5D, Vinyl alcohol, polymers 919-30-2, 3-Aminopropyltriethoxysilane 1184-84-5D, Vinylsulfonic acid, polymers 1314-23-4, Zirconium oxide, biological studies 1332-37-2, Iron oxide, biological studies 1344-28-1, Aluminum oxide, biological studies 2031-67-6, Methyltriethoxysilane 2171-98-4, Tetra-isopropyl zirconate 3087-36-3, Tetraethoxytitanium 3087-37-4, Tetrapropyl orthotitanate 3724-65-0D, Crotonic acid, polymers 5058-42-4, Triethoxy iron 5593-70-4, Tetrabutoxytitanium 9002-89-5, Polyvinyl alcohol 10595-80-9D, 2-Sulfoethyl methacrylate, polymers 13463-67-7, Titanium oxide, biological studies 23519-77-9, Tetrapropyl zirconate 25119-64-6, Itaconic acid homopolymer 26007-90-9, Crotonic acid homopolymer 26099-09-2, Maleic acid homopolymer 26101-52-0, Vinylsulfonic acid homopolymer 26914-43-2D, Styrene sulfonic acid, polymers 29382-27-2 31692-79-2, Polydimethylsiloxanediol 38599-26-7 45099-91-0D, polymers 50851-57-5, Styrene sulfonic

acid homopolymer 214688-70-7
 RL: BUU (Biological use, unclassified); BIOL (Biological study);
 USES (Uses)
 (method for improving stay-on properties of cosmetic compns.)

L157 ANSWER 15 OF 23 HCPLUS COPYRIGHT 2005 ACS on STN
 2001:262956 Document No. 135:33922 Investigation of load transfer
 between the fiber and the matrix in pull-out tests with fibers
 having different diameters. Zhandarov, S.; Pisanova, E.; Mader, E.;
 Nairn, J. A. (Institute of Polymer Research Dresden e. V., Dresden,
 01069, Germany). Journal of Adhesion Science and Technology, 15(2),
 205-222 (English) 2001. CODEN: JATEE8. ISSN: 0169-4243.

Publisher: VSP BV.

AB Single-fiber pull-out tests were used for investigation of the
 interfacial bond strength or toughness and load transfer between
 polymeric matrixes and glass fibers having different diams. The
 interfacial bond strength was well characterized by an ultimate
 interfacial shear strength (τ_{ult}) whose values were nearly
 independent of the fiber diameter. The same expts. were also analyzed
 by fracture mechanics methods to determine the interfacial toughness
 (G_{ic}). The critical energy release rate (G_{ic}) was a good material
 property for constant fiber diameter, but G_{ic} for initiation of debonding
 typically became smaller as the fiber diameter became larger. It was
 also possible to measure an effective shear-lag parameter, β ,
 characterizing the load transfer efficiency between the fiber and
 the matrix. β Decreased considerably with the fiber radius:
 this decrease scaled roughly as expected from elasticity theory.
 The measured results for β were used to calculate the radius of
 matrix material surrounding the fiber that was significantly
 affected by the presence of the fiber. The ratio of this radius to
 the fiber radius (R_m/r_f) was a function of the fiber diameter

IT 9002-89-5, Poly(vinyl alcohol)

RL: RCT (Reactant); RACT (Reactant or reagent)
 (coating; interfacial bond strength and load transfer between
 treated glass fibers and polymeric matrixes)

RN 9002-89-5 HCPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

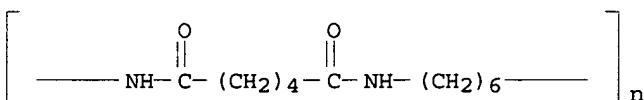
$\text{H}_2\text{C}=\text{CH}-\text{OH}$

IT 32131-17-2, Ultramid A5, properties

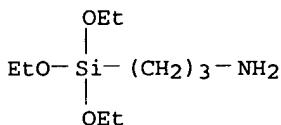
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (interfacial bond strength and load transfer between treated
 glass fibers and polymeric matrixes)

RN 32131-17-2 HCPLUS

CN Poly[imino(1,6-dioxo-1,6-hexanediyil)imino-1,6-hexanediyil] (9CI) (CA
 INDEX NAME)



IT 919-30-2, γ -Aminopropyltriethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sizing agent; interfacial bond strength and load transfer
 between treated glass fibers and polymeric matrixes)
 RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



CC 37-5 (Plastics Manufacture and Processing)
 IT 9002-89-5, Poly(vinyl alcohol)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (coating; interfacial bond strength and load transfer between
 treated glass fibers and polymeric matrixes)
 IT 9003-07-0D, Polypropylene, maleated 25038-54-4, polyamide 6,
 properties 32131-17-2, Ultramid A5, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (interfacial bond strength and load transfer between treated
 glass fibers and polymeric matrixes)
 IT 919-30-2, γ -Aminopropyltriethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sizing agent; interfacial bond strength and load transfer
 between treated glass fibers and polymeric matrixes)

L157 ANSWER 16 OF 23 HCPLUS COPYRIGHT 2005 ACS on STN
 2000:748785 Document No. 133:315651 Laser ablation-type transfer
 printing and its material including organic-inorganic hybrid layer.
 Kawamura, Tomonori; Kitamura, Shigehiro; Mori, Takahiro (Konica Co.,
 Japan). Jpn. Kokai Tokkyo Koho JP 2000296672 A2 20001024, 13 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-107835 19990415.

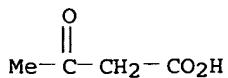
AB The material has an organic-inorg. hybrid layer (A) and a colorant
 layer (B) in the order on a support. The hybrid layer may be
 modified with a silane coupling agent. The A, B, or an internal
 layer between the two may contain a coupling agent. The material
 may be a laminate of a colorant sheet of above structure and an
 image receptor sheet having a heat- or pressure-sensitive adhesive
 layer facing to A. In printing process, the material is
 patternwisely exposed by laser and removed of the exposed part of
 the colorant layer. The material provides high-resolution and -d.
 images.

IT 39290-68-1P
 RL: PEP (Physical, engineering or chemical process); PNU
 (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); PROC (Process); USES (Uses)
 (Z 100, hybrid layer; laser ablation recording material including
 organic-inorg. hybrid layer and providing high-resolution images)

RN 39290-68-1 HCPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

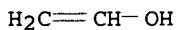


CM 2

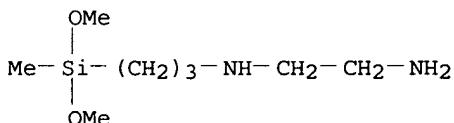
CRN 9002-89-5
 CMF (C₂ H₄ O)x
 CCI PMS

CM 3

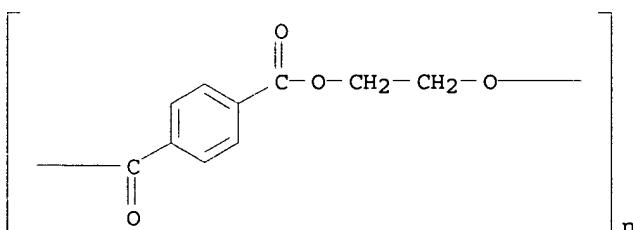
CRN 557-75-5
 CMF C₂ H₄ O



IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (hybrid layer modifier; laser ablation recording material
 including organic-inorg. hybrid layer and providing high-resolution
 images)
 RN 3069-29-2 HCAPLUS
 CN 1,2-Ethanediamine, N-[3-(dimethoxymethylsilyl)propyl]- (9CI) (CA
 INDEX NAME)



IT 25038-59-9, Diafoil T 100E, processes
 RL: PEP (Physical, engineering or chemical process); TEM (Technical
 or engineered material use); PROC (Process); USES (Uses)
 (receptor sheet; laser ablation recording material including
 organic-inorg. hybrid layer and providing high-resolution images)
 RN 25038-59-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA
 INDEX NAME)



IC ICM B41M005-26

ICS B41M005-40
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38, 55
 IT 39290-68-1P
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (Z 100, hybrid layer; laser ablation recording material including organic-inorg. hybrid layer and providing high-resolution images)
 IT 3069-29-2, N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane
 ne 65799-47-5, 3-Glycidoxypropylmethyldimethoxysilane
 RL: MOA (Modifier or additive use); USES (Uses)
 (hybrid layer modifier; laser ablation recording material including organic-inorg. hybrid layer and providing high-resolution images)
 IT 25038-59-9, Diafoil T 100E, processes
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (receptor sheet; laser ablation recording material including organic-inorg. hybrid layer and providing high-resolution images)

L157 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 1999:613717 Document No. 131:248283 Latent reactive blood-compatible agents. Guire, Patrick E.; Anderson, Aron B.; Amos, Richard A.; Everson, Terrence P. (Surmodics, Inc., USA). PCT Int. Appl. WO 9947176 A2 19990923, 73 pp. DESIGNATED STATES: W: AU, CA, JP, MX; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US5245 19990311. PRIORITY: US 1998-PV78383 19980318; US 1998-177318 19981022.

AB A reagent $XmYZn$ ($m, n \geq 1$) for use in passivating a biomaterial surface includes a latent reactive group X (e.g. a photoreactive group) and a bifunctional aliphatic acid Z (e.g. a fatty acid), linked by a spacer group Y in a manner that preserves the desired function of each group. Once bound to the surface via the latent reactive group, the reagent presents the aliphatic acid to the physiol. environment in vivo in a manner (e.g., concentration and orientation) sufficient to hold and orient albumin. Z is bifunctional in the sense of containing an aliphatic region and an anionic region which cooperate in attracting and binding albumin. The reagent is used to passivate the surface of an implantable medical device to render it hemocompatible, and specifically to lessen the binding of fibrinogen to the surface and associated thrombogenic phenomena. Thus, the adsorption of fibrinogen from human platelet-poor plasma onto a poly(vinyl chloride) surface modified with a N-vinylpyrrolidone/N-(3-methacrylamidopropyl)-2-(carboxymethyl)hexadecanamide/N-(3-methacrylamidopropyl)-3-carboxyheptadecanamide/N-[3-(4-benzoylbenzamido)propyl]methacrylamide copolymer was less than that to an unmodified surface. Platelet attachment to and activation on the modified surface were also decreased. Synthesis of the monomers is described. Also, a polyurethane jugular vein implant, coated with mono-2-(carboxymethyl)hexadecanamidopoly(oxyethylene) mono-4-benzoylbenzyl ether and mono-3-carboxyheptadecanamidopoly(oxyethylene) mono-4-benzoylbenzyl ether and implanted into dogs, showed less platelet attachment than uncoated implants.

IT 244254-20-4
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (in antithrombogenic coatings on medical devices; latent reactive

blood-compatible agents)

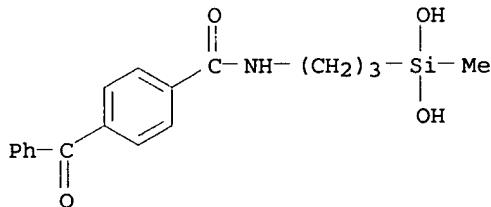
RN 244254-20-4 HCAPLUS

CN Heptadecanoic acid, 3-[[3-(dihydroxymethylsilyl)propyl]amino]carbon
ylyl-, polymer with 4-benzoyl-N-[3-(dihydroxymethylsilyl)propyl]benza
mide, 2-[2-[[3-(dihydroxymethylsilyl)propyl]amino]-2-
oxoethyl]hexadecanoic acid and dimethylsilanediol (9CI) (CA INDEX
NAME)

CM 1

CRN 244254-19-1

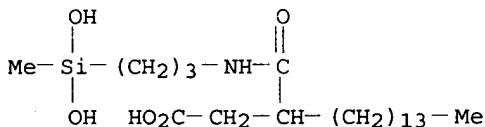
CMF C18 H21 N O4 Si



CM 2

CRN 244254-18-0

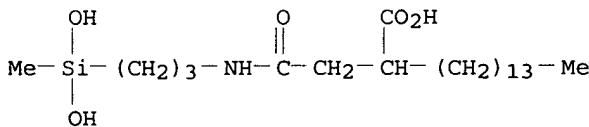
CMF C22 H45 N O5 Si



CM 3

CRN 244254-17-9

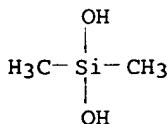
CMF C22 H45 N O5 Si



CM 4

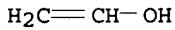
CRN 1066-42-8

CMF C2 H8 O2 Si



IT 9002-89-5, Poly(vinyl alcohol)
 RL: DEV (Device component use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (in medical devices, antithrombogenic coatings for; latent
 reactive blood-compatible agents)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

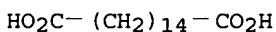
CM 1

CRN 557-75-5
CMF C2 H4 O

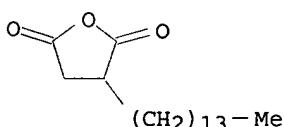
IT 108-30-5, reactions 505-54-4, 1,16-Hexadecanedioic
 acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (latent reactive blood-compatible agents)
 RN 108-30-5 HCPLUS
 CN 2,5-Furandione, dihydro- (9CI) (CA INDEX NAME)



RN 505-54-4 HCPLUS
 CN Hexadecanedioic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT 47165-57-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with amino group on surface of medical device; latent
 reactive blood-compatible agents)
 RN 47165-57-1 HCPLUS
 CN 2,5-Furandione, dihydro-3-tetradecyl- (9CI) (CA INDEX NAME)



IC ICM A61K047-48
 ICS A61L027-00

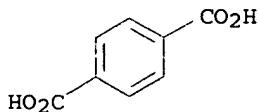
CC 63-7 (Pharmaceuticals)
 IT 244253-95-0 244253-96-1 244253-97-2 244253-98-3 244253-99-4
 244254-00-0 244254-01-1 244254-02-2 244254-03-3 244254-04-4
 244254-05-5 244254-06-6 244254-07-7 244254-08-8 244254-09-9
 244254-13-5 244254-15-7 244254-16-8 244254-20-4
 RL: BAC (Biological activity or effector, except adverse); BSU
 (Biological study, unclassified); DEV (Device component use); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (in antithrombogenic coatings on medical devices; latent reactive
 blood-compatible agents)
 IT 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene
 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl
 acetate) 9003-53-6, Polystyrene 9004-34-6D, Cellulose, derivs.,
 biological studies 9011-14-7, Poly(methyl methacrylate)
 25014-41-9, Polyacrylonitrile
 RL: DEV (Device component use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (in medical devices, antithrombogenic coatings for; latent
 reactive blood-compatible agents)
 IT 99-10-5, 3,5-Dihydroxybenzoic acid 108-30-5, reactions
 109-76-2, 1,3-Diaminopropane 112-60-7, Tetraethylene glycol
 112-67-4, Palmitoyl chloride 112-82-3, 1-Bromohexadecane
 134-84-9, 4-Methylbenzophenone 156-57-0 505-54-4,
 1,16-Hexadecanedioic acid 611-95-0, 4-Benzoylbenzoic acid
 1137-41-3, 4-Aminobenzophenone 2835-78-1, 3-Aminobenzophenone
 5675-51-4, 1,12-Dodecanediol 6627-89-0, tert-Butyl phenyl
 carbonate 23048-75-1, 10-Hydroxyhexadecanoic acid 25322-68-3
 36653-82-4, 1-Hexadecanol 72607-53-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (latent reactive blood-compatible agents)
 IT 47165-57-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with amino group on surface of medical device; latent
 reactive blood-compatible agents)

L157 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 1993:561855 Document No. 119:161855 Electron grafted barrier coatings
 for packaging film modification. Rangwalla, Imtiaz J.; Nablo, Sam
 V. (Energy Sci. Inc., Wilmington, MA, 01887, USA). Radiation
 Physics and Chemistry, 42(1-3), 41-5 (English) 1993. CODEN: RPCHDM.
 ISSN: 0146-5724.

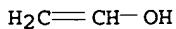
AB The O barrier performance of hydrolyzed organosilane films--coated,
 dried and electron-beam grafted to polyolefin film--has been
 studied. Excellent anti-scalping properties based upon limonene
 (dipentene) transmission measurements have also been observed. Results
 are also reported on O permeability reduction when the process is
 applied to common barrier polymers such as ethylene-vinyl alc.
 copolymer and polyacrylonitrile. Experience with its in-line
 application on LDPE is discussed.

IT 100-21-0D, Terephthalic acid, polymers with ethylene glycol
 and siloxanes, graft 557-75-5D, Vinyl alcohol, polymers
 with ethylene and siloxanes, graft 34937-00-3D, Z 6032,
 hydrolyzed, polymers with polyolefins, graft
 RL: USES (Uses)
 (for oxygen-impermeable packaging films)

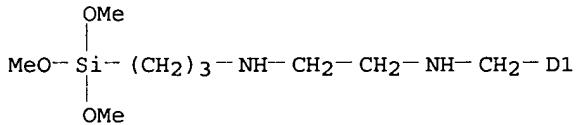
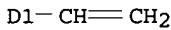
RN 100-21-0 HCAPLUS
 CN 1,4-Benzenedicarboxylic acid (9CI) (CA INDEX NAME)



RN 557-75-5 HCAPLUS
 CN Ethenol (9CI) (CA INDEX NAME)



RN 34937-00-3 HCAPLUS
 CN 1,2-Ethanediamine, N-[(ethenylphenyl)methyl]-N'-(3-(trimethoxysilyl)propyl)-, monohydrochloride (9CI) (CA INDEX NAME)



CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 35, 42
 IT 74-85-1D, Ethylene, polymers with siloxanes, graft 75-35-4D,
 Vinylidene chloride, polymers with siloxanes, graft
 100-21-0D, Terephthalic acid, polymers with ethylene glycol
 and siloxanes, graft 107-13-1D, Acrylonitrile, polymers with
 siloxanes, graft 107-21-1D, Ethylene glycol, polymers with
 terephthalic acid and siloxanes, graft 115-07-1D, Propylene,
 polymers with siloxanes, graft 557-75-5D, Vinyl alcohol,
 polymers with ethylene and siloxanes, graft 34937-00-3D, Z
 6032, hydrolyzed, polymers with polyolefins, graft
 RL: USES (Uses)
 (for oxygen-impermeable packaging films)

L157 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 1989:445333 Document No. 111:45333 Leach-resistant
 antimicrobial fabric for medical use. Kupits, John J. (W.
 R. Grace and Co., USA). U.S. US 4721511 A 19880126, 6 pp.
 (English). CODEN: USXXAM. APPLICATION: US 1984-658331 19841005.
 AB The title fabrics comprise a nonwoven substrate, a nonleachable,
 bioactive silicone quaternary amine, and an organic titanate. If alc.

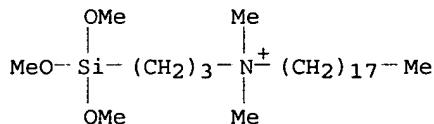
and water repellency are also desired, then the fabric further comprises a fluorocarbon repellent with an optional fluorocarbon extender. A nonwoven spunbonded polyethylene web (Evolution II) was wet impregnated at 150 °F with a saturant containing 2.54% solids and comprising iso-PrOH 45, NaOAc 2, citric acid 0.5, Aerotex Repellent 96 40, FC 824 (fluorocarbon repellent) 7.5, Q9-5700 (quaternary ammonium) 14, Tyzor TE (Ti chelate) 5, and water 886 g, and then dried at 225 °C for 5 min. The percent solids in the fabric were 3.81% of which 23.17% was Q9-5700, 11.82% was FC 824, 39.40% was Aerotex 96, 15.76% was Tyzor TE, 7.88% was NaOAc, and 1.97% was citric acid. The fabric is useful for surgical and medical goods such as hospital gowns.

IT 27668-52-6

RL: BIOL (Biological study)
(leach-resistant nonwoven fabric impregnated with titanium complex and)

RN 27668-52-6 HCAPLUS

CN 1-Octadecanaminium, N,N-dimethyl-N-[3-(trimethoxysilyl)propyl]-, chloride (9CI) (CA INDEX NAME)

● Cl⁻

IT 9002-89-5, Poly(vinyl alcohol)

RL: BIOL (Biological study)
(pigment binder, in bactericidal leach-resistant fabric manufacture)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H₂C=CH-OH

IC ICM A61K031-695
ICS A61K009-70

INCL 008188000

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 40

IT 27668-52-6

RL: BIOL (Biological study)
(leach-resistant nonwoven fabric impregnated with titanium complex and)

IT 9002-89-5, Poly(vinyl alcohol)

RL: BIOL (Biological study)
(pigment binder, in bactericidal leach-resistant fabric manufacture)

L157 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
1988:632667 Document No. 109:232667 Effect of chemical treatment on

thermal behavior of jute fibers. Varma, I. K.; Krishnan, S. R. Anantha; Krishnamoorthy, S. (Cent. Mater. Sci. Technol., Indian Inst. Technol. Delhi, New Delhi, 110 016, India). Textile Research Journal, 58(8), 486-94 (English) 1988. CODEN: TRJOA9. ISSN: 0040-5175.

AB Jute fibers waterproofed by reaction with iso-Pr triisostearoyl titanate, (γ -aminopropyl)trimethoxysilane, TDI, or sebacyl chloride, or by coating with polyester or vinyl ester resins had a 30-40% reduction in moisture uptake. Maximum reduction in moisture uptake was obtained with the resin treatments. Thermal stability of the fibers at elevated temps. was only marginally affected by the treatments.

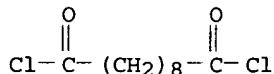
IT 111-19-3, Sebacyl chloride 557-75-5D, Ethenol, esters, polymers with styrene 13822-56-5, (γ -Aminopropyl)trimethoxysilane

RL: USES (Uses)

(waterproofing of jute fibers by, thermal properties in relation to)

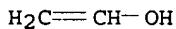
RN 111-19-3 HCPLUS

CN Decanedioyl dichloride (9CI) (CA INDEX NAME)



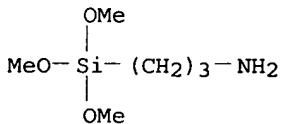
RN 557-75-5 HCPLUS

CN Ethenol (9CI) (CA INDEX NAME)



RN 13822-56-5 HCPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



CC 40-9 (Textiles and Fibers)

IT 111-19-3, Sebacyl chloride 557-75-5D, Ethenol, esters, polymers with styrene 13822-56-5, (γ -Aminopropyl)trimethoxysilane 26471-62-5, Toluene diisocyanate 61417-49-0

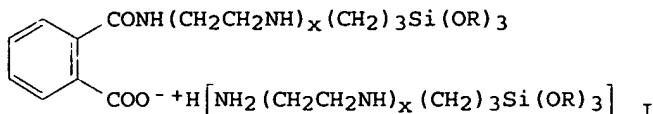
RL: USES (Uses)

(waterproofing of jute fibers by, thermal properties in relation to)

L157 ANSWER 21 OF 23 HCPLUS COPYRIGHT 2005 ACS on STN

1985:488074 Document No. 103:88074 Bis(trialkoxysilyl)amidoammonium salts. Florovic, Stanislav; Forro, Juraj; Martisovic, Jozef (Czech.). Czech. CS 215229 B 19841015, 7 pp. (Czech). CODEN: CZXXA9. APPLICATION: CS 1981-15 19810104.

GI



AB Bis(trialkoxysilyl)amidoammonium salts I (x = 0,1,2; R = Me, Et), suitable as sizing and coupling agents for glass fibers applied as plastics reinforcement, are prepared from 1 mol phthalic anhydride (II) and 2 mol H₂N(CH₂CH₂NH)_x(CH₂)₃Si(OR)₃ in a H₂O-miscible organic solvent at 0-70°. Thus, I (x = 0, R = Et) was prepared from II 14.8, (3-aminopropyl)triethoxysilane 44.3, and dioxane 59.1 g at 40° and was used for lubrication of glass fibers 13 μm in the amount of 0.25%. Polyamide filled with 30% lubricated fiber had bending strength 143 MPa and Brinell hardness 146 MPa in comparison with 70 and 117 MPa, resp., of polyamide with nonlubricated fibers.

IT 97848-00-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

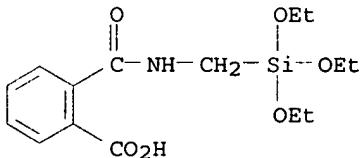
RN 97848-00-5 HCPLUS

CN Benzoic acid, 2-[[[(triethoxysilyl)methyl]amino]carbonyl]-, compd. with 3-(triethoxysilyl)-1-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 97847-99-9

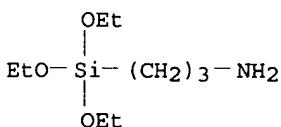
CMF C15 H23 N O6 Si



CM 2

CRN 919-30-2

CMF C9 H23 N O3 Si

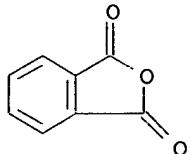


IT 85-44-9

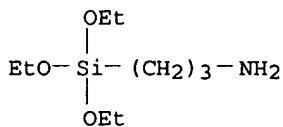
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (aminopropyl)silanes)

RN 85-44-9 HCPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



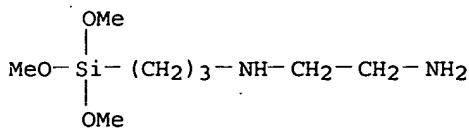
IT 919-30-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phthalic anhydride)
 RN 919-30-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



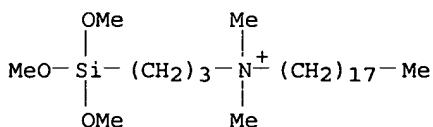
IC C07F007-10
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 40
 IT 97848-00-5P 97848-01-6P 97848-03-8P 97848-05-0P
 97848-07-2P 97848-09-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 85-44-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (aminopropyl)silanes)
 IT 919-30-2 1760-24-3 4693-51-0 5089-72-5 13822-56-5
 35141-30-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phthalic anhydride)

L157 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 1981:210410 Document No. 94:210410 Aqueous metal amine silicate solutions, amorphous materials derived from them and their use. Frye, Cecil Leonard; Hyde, James Franklin; Daudt, William Herbert (Dow Corning Corp., USA). Ger. Offen. DE 3031598 19810326, 44 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1980-3031598 19800821.
 AB A metal compound such as ZnO, Ag2O, CuO, malachite, or CdO and a silane such as (MeO)3SiMe, (MeO)3Si(CH2)3Si(CH2)2CONH2, (MeO)3SiCH2CH2CF3, or (MeO)3Si(CH2)3N+Me3Cl- are used with NH3, MeNH2, or H2NCH2CH2NH2 in water to prepare metal amine siliconates which have antimicrobial properties (e.g., against *Aspergillus niger*). They are dried to form amorphous materials and are used as antimicrobial agents in ointments and in coating and/or impregnating materials (e.g., alkyd resins, siloxanes, acrylic polymer emulsions) for use on paper, stone, etc. Thus, a mixture of 600 g 28% aqueous NH3 and 97.6 g ZnO was treated with 327 g (MeO)3SiMe during 45 min to prepare a reaction product which (40 parts) was mixed with 60 parts Arolon 363 (alkyd), coated on a surface, and dried to prepare a coating with better scratch resistance, compared with a coating of unmodified Arolon 363.
 IT 1760-24-3D, reaction products with amines and transition metal oxides 27668-52-6D, reaction products with amines and transition metal oxides 35141-36-7D, reaction products with amines and transition metal oxides

RL: USES (Uses)
 (antimicrobial, coatings and ointments containing)
 RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

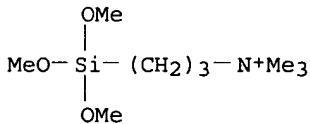


RN 27668-52-6 HCPLUS
 CN 1-Octadecanaminium, N,N-dimethyl-N-[3-(trimethoxysilyl)propyl]-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 35141-36-7 HCPLUS
 CN 1-Propanaminium, N,N,N-trimethyl-3-(trimethoxysilyl)-, chloride (9CI) (CA INDEX NAME)

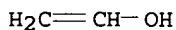


● Cl⁻

IT 9002-89-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, containing antimicrobial metal amine
 siliconates)
 RN 9002-89-5 HCPLUS
 CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

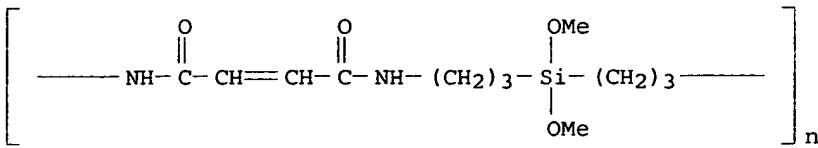


IC C08G077-58; D21H005-22; C04B041-32
 CC 42-4 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 63
 IT Coating materials
 Ointments
 (antimicrobial metal amine siliconates for)
 IT Siloxanes and Silicones, uses and miscellaneous
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, containing antimicrobial metal amine
 siliconates)
 IT 74-89-5D, reaction products with transition metal oxides and silanes
 107-15-3D, reaction products with transition metal oxides and
 silanes 429-60-7D, reaction products with amines and transition
 metal oxides 1185-55-3D, reaction products with amines and
 transition metal oxides 1306-19-0D, reaction products with amines
 and silanes 1314-13-2D, reaction products with amines and silanes
 1317-38-0D, reaction products with amines and silanes 1319-53-5D,
 reaction products with amines and silanes 1760-24-3D,
 reaction products with amines and transition metal oxides
 2768-02-7D, reaction products with amines and transition metal
 oxides 2996-92-1D, reaction products with amines and transition
 metal oxides 3069-19-0D, reaction products with amines and
 transition metal oxides 4236-53-7D, reaction products with
 amines and transition metal oxides 5314-55-6D, reaction products with
 amines and transition metal oxides 7664-41-7D, reaction products
 with transition metal oxides and silanes 11113-88-5D, reaction
 products with amines and silanes 12653-71-3D, reaction products
 with amines and silanes 27668-52-6D, reaction products
 with amines and transition metal oxides 35141-36-7D,
 reaction products with amines and transition metal oxides
 52977-25-0D, reaction products with amines and transition metal
 oxides 74837-43-7D, reaction products with amines and transition
 metal oxides
 RL: USES (Uses)
 (antimicrobial, coatings and ointments containing)
 IT 9002-89-5 9004-64-2 65589-87-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, containing antimicrobial metal amine
 siliconates)

L157 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
 1974:122151 Document No. 80:122151 Glass fiber-reinforced elastomers.
 Marzocchi, Alfred (Owens-Corning Fiberglas Corp.). U.S. US 3773607
 19731120, 12 pp. (English). CODEN: USXXAM. APPLICATION: US
 1971-154097 19710617.

AB Glass fibers were treated with silylamides prepared by treating
 (aminoorgano)silanes with organic carboxylic or polycarboxylic acids to
 improve their adhesion to glass fibers. Thus, a dispersion of 1
 mole (γ -aminopropyl)triethoxysilane [919-30-2] in petroleum
 was heated 1 hr at 95.deg. with 1 mole lauric acid [143-07-7],
 giving (γ -lauramidopropyl)triethoxysilane [51202-98-3]. The
 amides were also useful as sizing agents for glass fibers.

IT 51728-24-6
 RL: USES (Uses)
 (adhesion promoters and sizing agents, for glass fibers)
 RN 51728-24-6 HCAPLUS
 CN Poly[imino(1,4-dioxo-2-butene-1,4-diyl)imino-1,3-
 propanediyl(dimethoxysilylene)-1,3-propanediyl], (Z)- (9CI) (CA
 INDEX NAME)



IC B32B; C03C

INCL 161176000

CC 38-9 (Elastomers, Including Natural Rubber)

IT 98-88-4D, Benzoyl chloride, reaction products with
aminoalkylsiloxyanes 141-82-2D, Propanedioic acid, reaction
products with aminoalkylsiloxyanes 143-07-7D, Dodecanoic acid,
reaction products with aminoalkylsiloxyanes 51728-24-6
51728-25-7 51749-37-2 51749-39-4 51833-28-4 51833-29-5
51833-30-8 51833-31-9

RL: USES (Uses)
(adhesion promoters and sizing agents, for glass fibers)

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